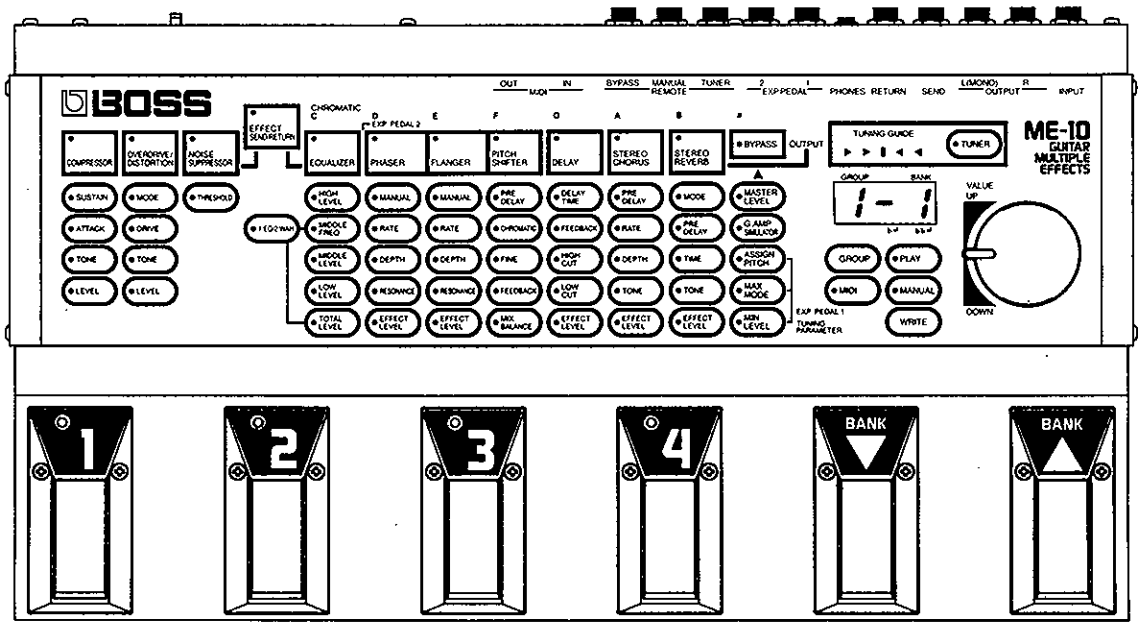
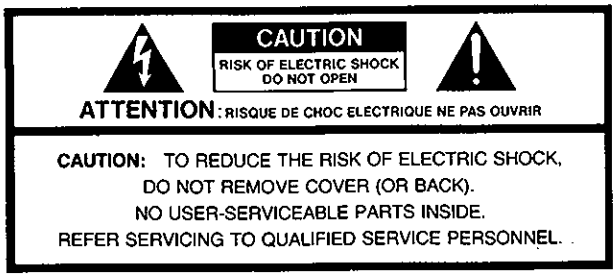
BOSS

ME-10 GUITAR MULTIPLE EFFECTS

Owner's Manual




CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
ATTENTION: RISQUE DE CHOC ELECTRIQUE NE PAS OUVRIR
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

INSTRUCTIONS PERTAINING TO A RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS.

IMPORTANT SAFETY INSTRUCTIONS

WARNING — When using electric products, basic precautions should always be followed, including the following:

1. Read all the instructions before using the product.
2. Do not use this product near water — for example, near a bathtub, washbowl, kitchen sink, in a wet basement, or near a swimming pool, or the like.
3. This product should be used only with a cart or stand that is recommended by the manufacturer.
4. This product, either alone or in combination with an amplifier and headphones or speakers, may be capable of producing sound levels that could cause permanent hearing loss. Do not operate for a long period of time at a high volume level or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should consult an audiologist.
5. The product should be located so that its location or position does not interfere with its proper ventilation.
6. The product should be located away from heat sources such as radiators, heat registers, or other products that produce heat.
7. Avoid using the product where it may be affected by dust.
8. The product should be connected to a power supply only of the type described in the operating instructions or as marked on the product.
9. The power-supply cord of the product should be unplugged from the outlet when left unused for a long period of time.
10. Do not tread on the power-supply cord.
11. Do not pull the cord but hold the plug when unplugging.
12. When setting up with any other instruments, the procedure should be followed in accordance with instruction manual.
13. Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
14. The product should be serviced by qualified service personnel when:
    A. The power-supply cord or the plug has been damaged; or
    B. Objects have fallen, or liquid has been spilled into the product; or
    C. The product has been exposed to rain; or
    D. The product does not appear to operate normally or exhibits a marked change in performance; or
    E. The product has been dropped, or the enclosure damaged.
15. Do not attempt to service the product beyond that described in the user-maintenance instructions. All other servicing should be referred to qualified service personnel.

SAVE THESE INSTRUCTIONS

For the U.K.

WARNING: THIS APPARATUS MUST BE EARTHED

IMPORTANT: THE WIRES IN THIS MAINS LEAD ARE COLOURED IN ACCORDANCE WITH THE FOLLOWING CODE.
GREEN-AND-YELLOW: EARTH, BLUE: NEUTRAL, BROWN: LIVE

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:

The wire which is coloured GREEN-AND-YELLOW must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol ⏚ or coloured GREEN or GREEN-AND-YELLOW.

The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK.

The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.

The product which is equipped with a THREE WIRE GROUNDING TYPE AC PLUG must be grounded.

■ Before You Begin

We'd like to take a moment to thank you for purchasing the Boss ME-10 Guitar Mulultiple Effects device.
To fully realized the potential of the ME-10, and to ensure years of trouble-free service, please take the time to read this manual in its entirety.

■ Main Features

The Best of Analog and Digital

The ME-10 takes full advantage of the best qualities of analog and digital technologies. The compressor, overdrive/distortion sounds are analog and the pitch shifter, delay, stereo chorus and stereo reverb are digital effects.

Thirteen Different Effects

The ME-10 comes with thirteen of the effects that guitar players want most. In addition, you can store send/return settings in a patch and integrate other favorite effects into the signal chain of the ME-10.

Simple Editing Operations

The effects parameters are laid out for you on the top panel, making selection and editing easier.

Store up to 128 Effects Settings

You can store up to 128 different effects settings in the ME-10's internal memory, and recall them instantly using the footswitch pedals.

Control Parameters in Real Time

You can control certain parameters in real time with an Expression Pedal (optional). This lets you alter effects sounds while you're playing.

Chromatic Tuner with Special Guitar Mode

The ME-10 comes equipped with a chromatic tuner that can display the note and the guitar string you are tuning. When you're in a live performance situation, this is great for a quick tune-up without unplugging.

Manual Mode For A "Pedal" Feel

Using Manual Mode, you can use the ME-10 pedals to switch effects on and off, as if you were using a series of compact 'pedal' effects. This also makes it easy to call up and edit effects settings while playing.

Long Delay and Reverb with no Cut-off

Delay and reverb will decay naturally instead of being abruptly cut off when you switch from one patch to another.

■ Using This Manual

We've divided this Owner's Manual into five major sections that you should read in order. They tell you all you need to know about basic operations and features, and how to make the various settings. At the back is an index you can use when you run across unfamiliar words or concepts.

Summary

Section I: The Sounds

Basic operations, from making the connections to selecting effects sounds.

Section II: Changing the Settings

How to make or change settings for the effects sounds, external effects controller and save them in a patch. You'll need to read this when you start to create your own effects sounds or use the various editing features.

Section III: Getting To Know Your Effects

You can make up new sounds by changing the settings of the parameters (basic elements of the sound) for each effect. Each parameter, and what effect it has on the sound, is explained in this section.

Section IV: MIDI

You'll want to read this section to get the most out of the MIDI features.

Section V: Appendices

Factory preset settings, and what to do if things aren't working as expected.

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■ Contents

■ **Main Features** 3
■ **Using this Manual** 3
■ **Contents** 4
■ **Precautions for Use** 6
■ **Part Names** 7

Section I: The Sounds

■ **Making the Connection** 10
■ **Turning On the Power** 11
■ **Selecting Patches** 11
1. Selecting a Group 12
2. Selecting a Bank 12
3. Selecting a Number 12
《Calling Up a Patch》 13
■ **Bypass On/Off** 14
■ **Using the Tuner** 15
1. Tuner Mode 15
2. Tuning Display 16
3. How to Tune 17
4. Customiziizing the Tuner 18
1) Changing the Standard Pitch 18
2) Changing Modes 18
3) Changing the Output Level 19

Section II: Changing the Settings

■ **Making Effect Settings** 22
1. Selecting the Patch to be Modified 22
2. Effects On/Off 23
3. Setting the Parameters 24
4. Others Parameters Stored in a Patch
1) Effect Send/Return 25
2) Expression Pedal Settings 26
3) Master Level 27
5. Canceling a Setting 28
■ **The Write Operation** 29
■ **Copying** 30
■ **Manual Mode** 31
1. Selecting the Manual Mode 31
2. Manual Mode Operations 32
1) Switching Effects On and Off 32
2) Changing Parameters 33
3) Changing the Expression Pedal Assignment 33
■ **Using Expression Pedal 2** 34

Section III: The Effects

☐ **Compressor** 36
☐ **Overdrive/Distortion** 37
☐ **Noise Suppressor** 37
☐ **Equalizer** 38
☐ **Phaser** 39
☐ **Flanger** 40
☐ **Pitch Shifter** 41
☐ **Delay** 42
☐ **Stereo Chorus** 43
☐ **Stereo Reverb** 44
☐ **Guitar Amp Simulator** 45

Section IV: MIDI

■ **About MIDI** 48
1. Exchanging MIDI Messages 48
2. MIDI Messages Handled by the ME-10 49
■ **So, What Can You Do With MIDI?** 50
1. Selecting Patches Via MIDI 50
《Switching Patches on External MIDI Devices》 50
《Switching Patches on the ME-10 from External Devices》 50
2. Transmitting Data Via MIDI 51
■ **MIDI Channels and Omni Mode** 51
■ **Transmitting Data** 52
1. Transmitting Data (Bulk Dump) 52
2. Receiving Data (Bulk Load) 53

Section V: Appendices

■ **Troubleshooting** 56
■ **Patch/Program Change Number Table** 57
■ **Factory Presets** 57
■ **Initialization** 58
〈〈Initializing One Patch〉〉 58
〈〈Initializing All Patches〉〉 58
■ **About Roland SysEx Messages** 59
■ **MIDI Implementation** 61
■ **MIDI Implementation Chart** 64
■ **Blank Chart** 65
■ **Specifications** 68
■ **Index** 69

■ Precautions for Use

In addition to the items listed under Safety Precautions on page 2, please read and adhere to the following:

[Power Supply]

- When making any connections with other devices, always turn off the power to all equipment first; this will help prevent damage or malfunction.
- Do not use this unit on the same power circuit with any device that will generate line noise, such as a motor or variable lighting system.

[Placement]

- Using the unit near power amplifiers (or other equipment containing large transformers) may induce hum.
- This unit may interfere with radio and television reception. Do not use this unit in the vicinity of such receivers.
- Do not expose this unit to temperature extremes (eg. direct sunlight in an enclosed vehicle can deform or discolor the unit) or install it near devices that radiate heat.

[Maintenance]

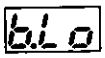
- For everyday cleaning wipe the unit with a soft, dry cloth (or one that has been slightly dampened with water). To remove stubborn dirt, use a mild neutral detergent. Afterwards, be sure to wipe the unit thoroughly with a soft, dry cloth.
- Never use benzene, thinners, alcohol or solvents of any kind, to avoid the risk of discoloration and/or deformation.

[Additional Precautions]

- Protect the unit from strong impact.
- Never strike or apply strong pressure to the display.
- A small amount of heat will radiate from the unit, and thus should be considered normal.
- Before using the unit in a foreign country, consult with qualified service personnel.

[Memory Backup]

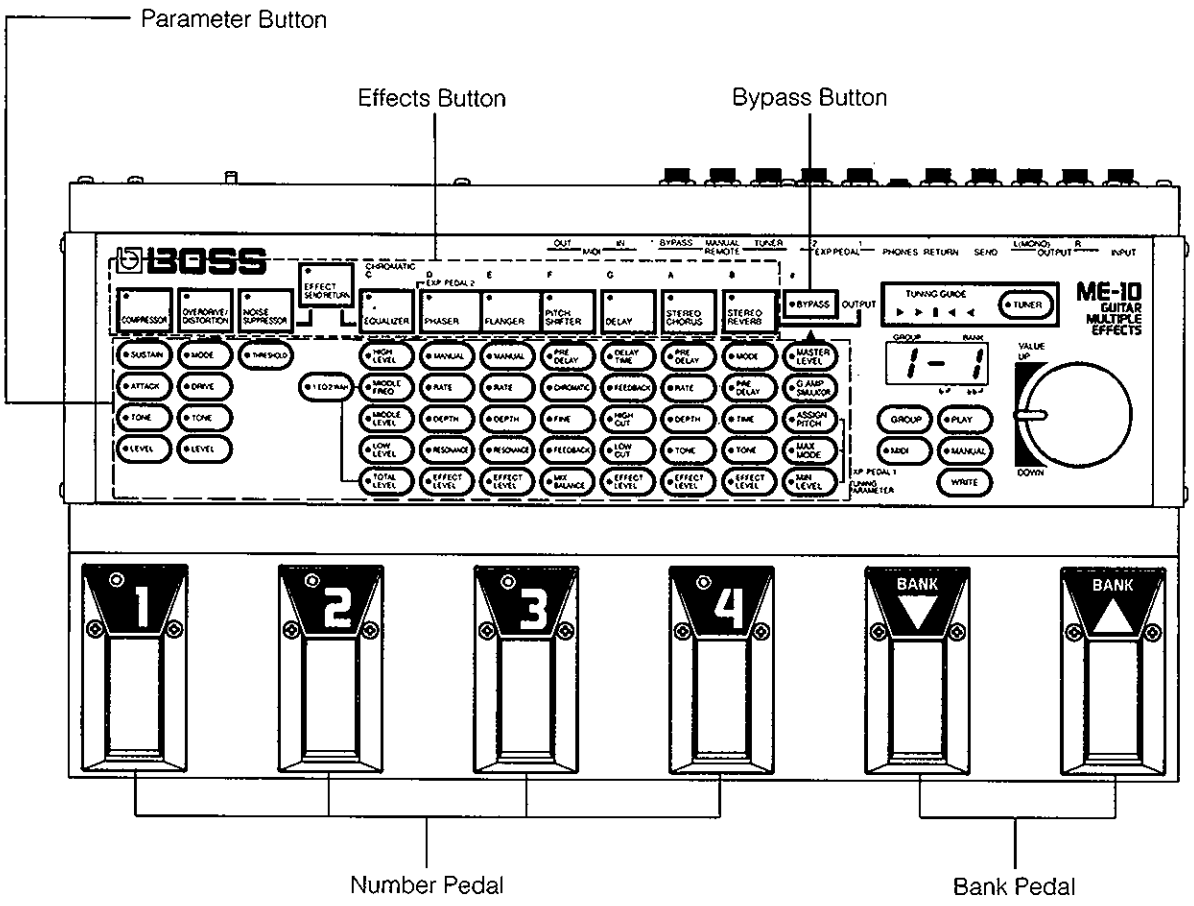
- The unit contains a battery which maintains the contents of memory while the main power is off. The expected life of this battery is 5 years or more.
- When the battery becomes weak the following message will appear in the display: "b.Lo". However, by that time the contents of memory may have already been lost.



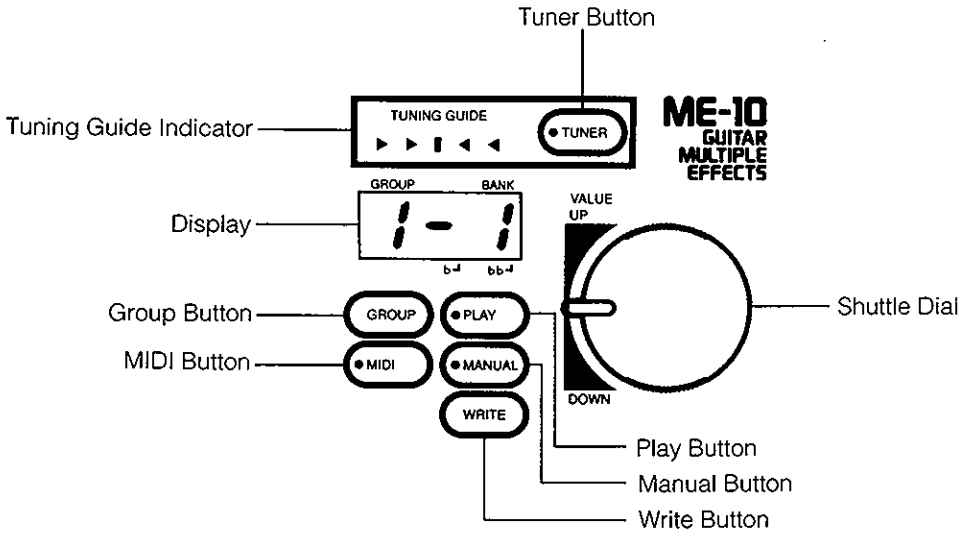
- Please be aware that the contents of memory may at times be lost; when the unit is sent for repairs or when by some chance a malfunction has occurred. Important data should be stored BOSS BL-1 Bulk Librarian, sequencer, or written down on paper.

■ Part Names

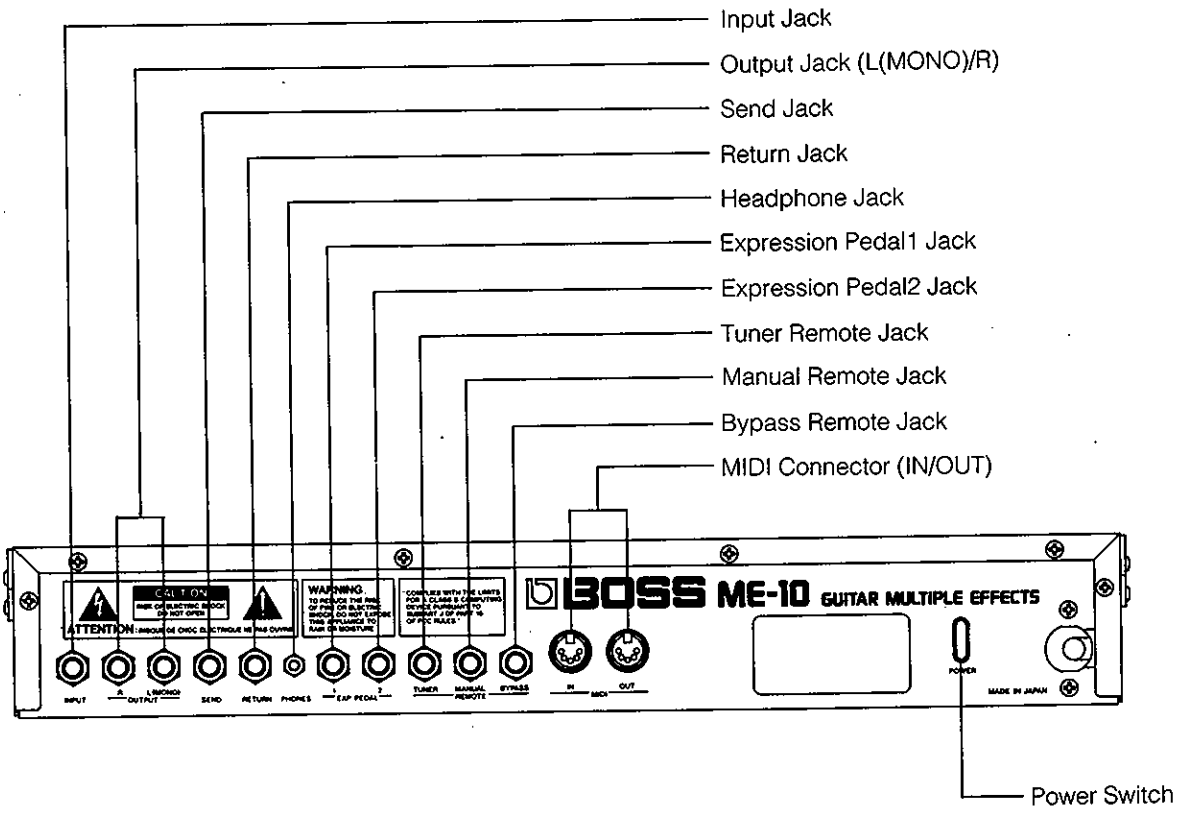
Front Panel

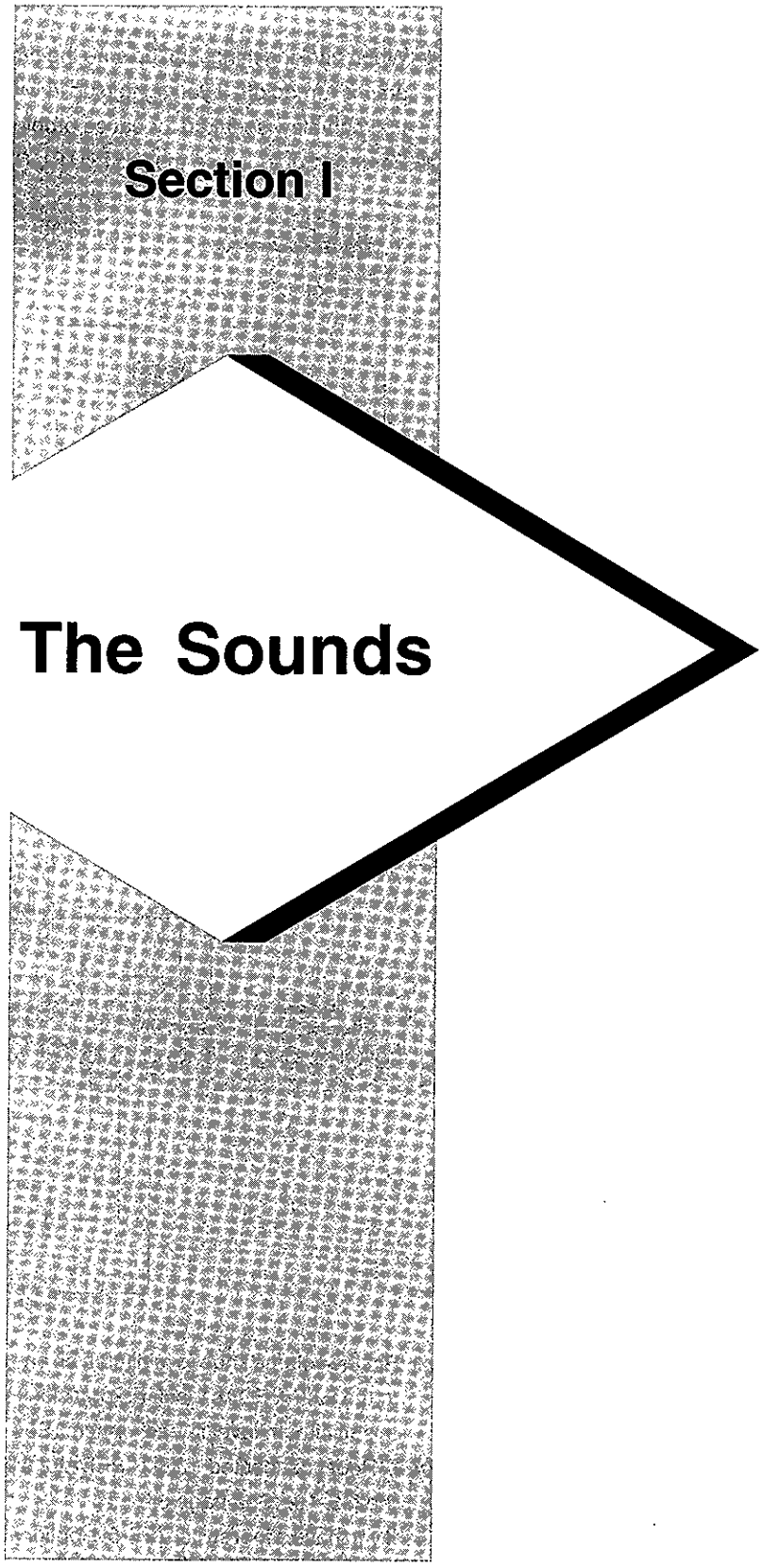


Front Panel:Control



Rear Panel

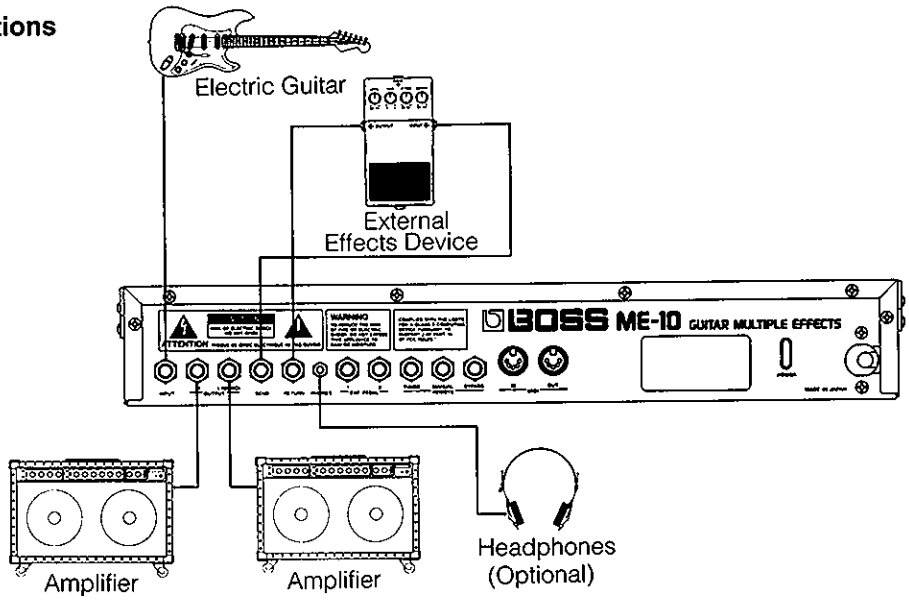

Input Jack
Output Jack (L(MONO)/R)
Send Jack
Return Jack
Headphone Jack
Expression Pedal1 Jack
Expression Pedal2 Jack
Tuner Remote Jack
Manual Remote Jack
Bypass Remote Jack
MIDI Connector (IN/OUT)
BOSS ME-10 GUITAR MULTIPLE EFFECTS
Power Switch


Section I
The Sounds

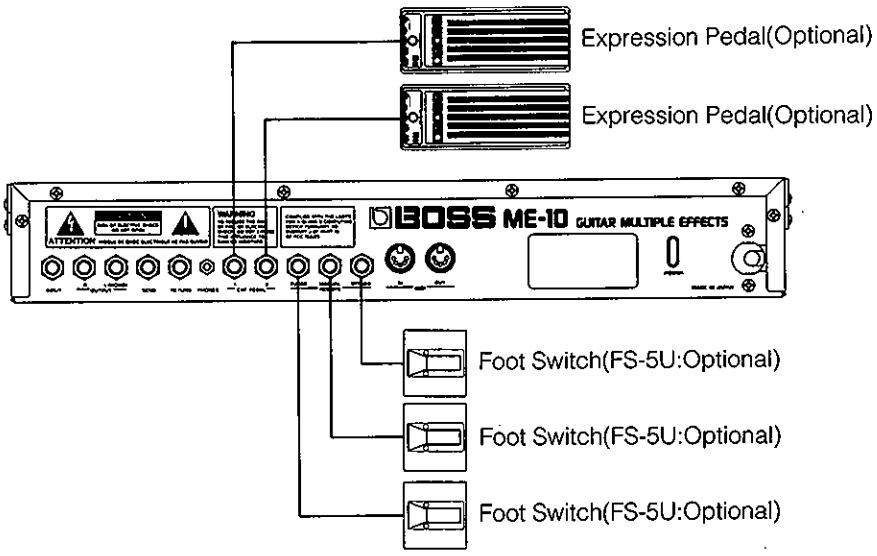
■Making the Connection

* When hooking things up, be sure the amp volume is turned down all the way and the amp is turned off. If you try to plug in with the amp on, you might get a voltage spike that can blow speakers or cause problems down the line.
* For mono output, use the OUTPUT L (MONO) jack.

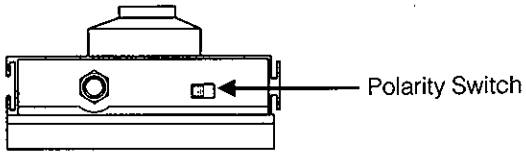
● Guitar and Amp Connections



● Connecting Other Devices

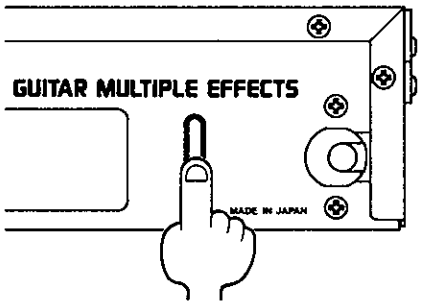


* Set the volume knob to minimum on any Expression Pedal you might have connected to the EXP.PEDAL1 jack (Expression Pedals are sold separately). You can also set this minimum level in each patch. (See page 26.)
* A Pedal connected to EXP.PEDAL2 will let you control the minimum output level of the ME-10. (See page 34.)
* If you have a foot switch (FS-5U; optional) connected to any of the remote jacks, make sure the polarity switch is set as shown below.



■Turning On the Power

When all external devices are properly connected, turn on the ME-10. The indicator light on the Play button should come on, indicating that you are in Play mode (where you can select patches).



* You can turn on the amp (and set the volume) after all other devices have been turned on.
* A protection circuit momentarily mutes the ME-10's output after power up.

■Selecting Patches

〈〈What is a Patch?〉〉

You can store, and recall, up to 128 different combinations of effects sounds and their settings in the ME-10's memory. Each one of these stored combinations is called a "patch". The 128 patches on the ME-10 are divided into four Groups (1-4) of 32 patches each. Each group is further divided into eight Banks (1-8) of four Patches (1-4) each.

〈GROUP 1〉

		BANK							
		1	2	3	4	5	6	7	8
NUMBER	1								
	2								
	3								
	4								

〈GROUP 3〉

		BANK							
		1	2	3	4	5	6	7	8
NUMBER	1								
	2								
	3								
	4								

〈GROUP 2〉

		BANK							
		1	2	3	4	5	6	7	8
NUMBER	1								
	2								
	3								
	4								

〈GROUP 4〉

		BANK							
		1	2	3	4	5	6	7	8
NUMBER	1								
	2								
	3								
	4								

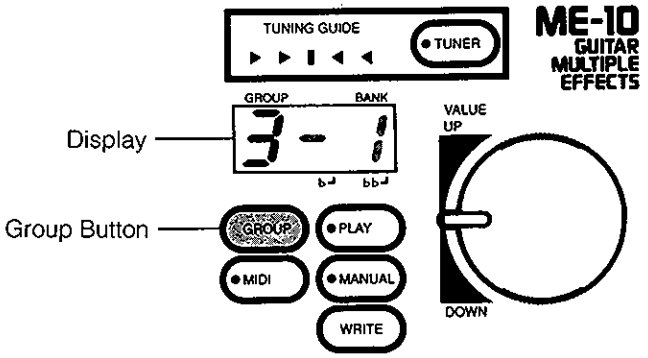
Every patch in the ME-10 is identified by its Group-Bank-Patch number. This is the number you'll need when you want to select (call up) a given patch while playing.

* Each time power is turned on, you will find that the Patch that was selected the last time the unit was on will again be selected.

You can select a new patch whenever the Play button light is on. If the light is flashing or off, just press the Play button to enable patch selection.

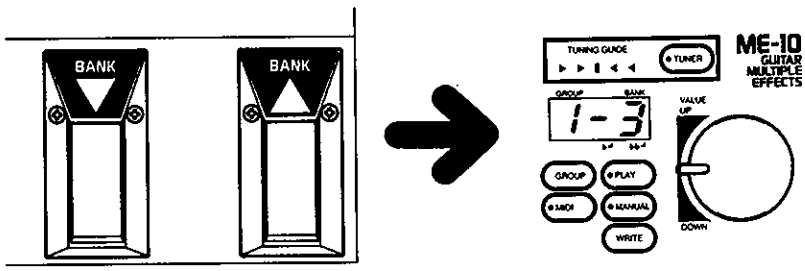
1. Selecting a Group

Press the Group button on the front panel to select a Group number (1 to 4). Each press of the button advances the Group number by one. The currently selected Group number will be indicated in the LED display as shown at left.



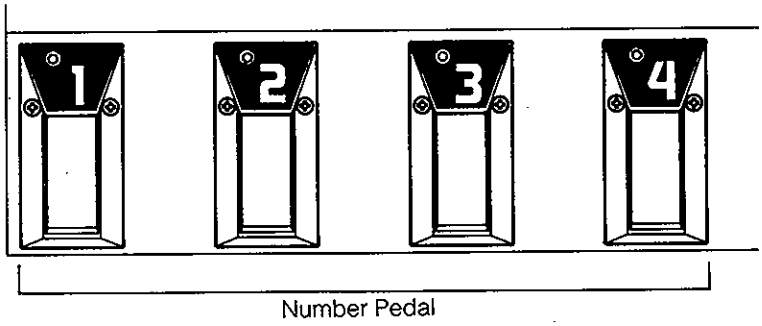
2. Selecting a Bank

Select a Bank using the Bank pedals. Each press of the [▲] pedal increases the Bank number by one, and each press of the [▼] pedal decreases it by one. The currently selected Bank number will be indicated in the LED display as shown at right.



3. Selecting a Number

The patch number is selected by pressing one of the Number pedals; just press the pedal corresponding to the number you want. The light on the pedal will come on to indicate that it has been selected.



⟨⟨Call Up a Patch⟩⟩

There are two ways to select a patch; you can use whichever method suits your need.

* Method 1 is the factory default setting.

⟨"Wait for a Number": Method 1⟩

Change the Group and Bank numbers as much as you want. The display may change, but the patch will not change until you depress a Number pedal. At that point, the effects corresponding to that Group-Bank-Number will kick in. If you want to switch between numbers within the same Group-Bank, just depress the appropriate Number pedal to go straight to the patch you want.

* If you change your mind about switching patches, press the [PLAY] button to go back to the patch you started with.

⟨"Switch It Now": Method 2⟩

With this method, you switch immediately to whatever effect sound corresponds to the currently selected Group-Bank-Number combination. For example, if 1-1-1 is displayed and you depress the [▲] Bank pedal, you will immediately switch over to 1-2-1.

[Selecting the Call-Up Method]

Follow these directions to select the desired patch call-up method.

① Turn the ME-10 off.

② Hold down the [▲] pedal and turn the power on.

③ The currently selected call-up method will be indicated in the LED display; P-1 for the "Wait for a Number" method, and P-2 for the "Switch It Now" method. Gently rotate the shuttle dial to select the one you want.

④ Press [PLAY] to return to normal operation.

The selected method will now be active every time you turn on the ME-10.

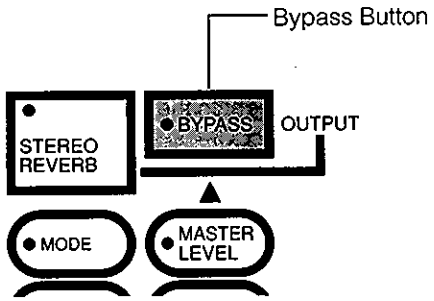
■Bypass On/Off

When all you want is the direct guitar sound (no effects) coming through the ME-10, turn on Bypass.

✻ The Bypass setting cannot be saved in a patch.

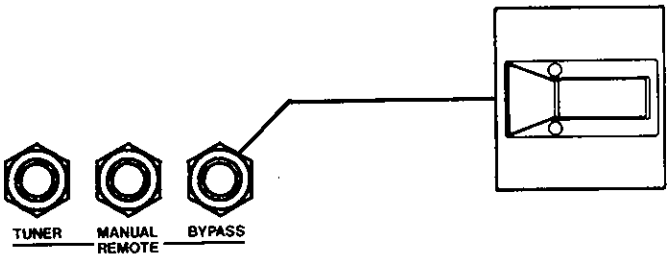
☐ Turning Bypass On and Off

Every time you press the [BYPASS] button, you turn the function on or off.



☐ Bypass; Footswitch Operation

If you connect an optional FS-5U footswitch to the BYPASS REMOTE jack, you can turn Bypass on and off by depressing the footswitch. It works in the same way as pressing the Bypass button on the panel.



◆ Whenever You Press [PLAY]...

You can also press [PLAY] to cancel Bypass and hear the effect sound of the currently selected patch.

■Using the Tuner

The ME-10 comes with an on-board chromatic tuner that can be used for quick tune-ups without unplugging! The tuner is loaded with features like display by note name and string name, flat tuning, and adjustable output level.

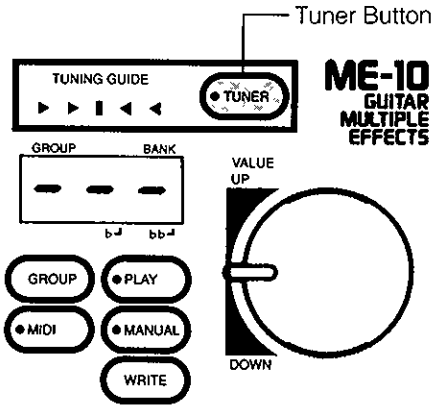
1. Switching to Tuner Mode

To tune up, switch on the internal Tuner.

* When you first switch to Tuner mode, the tuning standard pitch will appear for about half a second in the LED display. You can start tuning right away, even while this is being displayed.
* To change the standard pitch, see "Changing the Standard Pitch" on page 18.
* To use a flat tuning mode, or switch between the different modes of display, see "Changing Modes" on page 18.
* To adjust the output level, see "Changing the Output Level" on page 19.

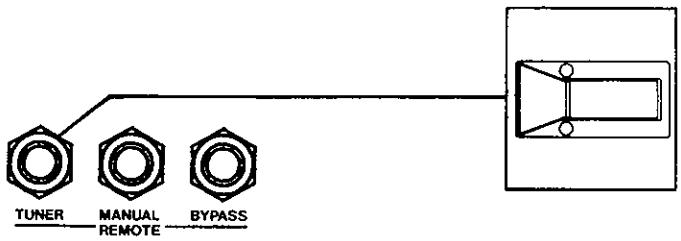
☐ Switch to Tuner; Panel Selection

Every press of the [TUNER] button turns the Tuner on or off. When the Tuner is on, the Tuner light will also be on.



☐ Using a Footswitch

If you have an optional FS-5U Footswitch connected to the TUNER REMOTE jack, you can turn the Tuner on and off using the footswitch. It works in the same way as pressing the Tuner button.



◆ Whenever You Press [PLAY]...

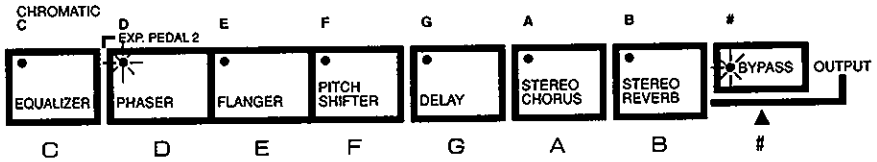
You can also press [PLAY] to cancel the Tuner and hear the effect sound of the currently selected patch.

2. Tuning Display

The note names for the tuner are printed above the effects buttons (from Equalizer to Bypass). When you play in Tuner mode, the buttons will light to indicate the nearest note to the one you played. You'll also see the string name and note name in the display.

1) Panel Light Display

The name of the note you played will be displayed using the pedal lights running from the Equalizer to the Bypass button.

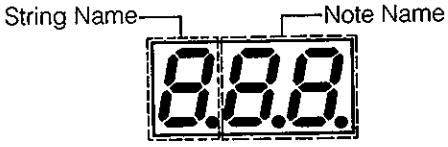


For example, the Phaser and Bypass bottons will light to indicate a D#.

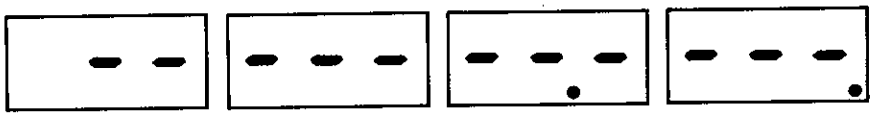
* The button lights always show the absolute note names. So, if you are using flat tuning (or double flat tuning), these will be a half-step (or whole step) lower than the note name in the LED display.

2) LED Display

The note name and string name are shown in the LED display. The string name is on the left, and the next two positions give the note name.



* For pitches between notes, the following display indicates there's currently no input to the ME-10.

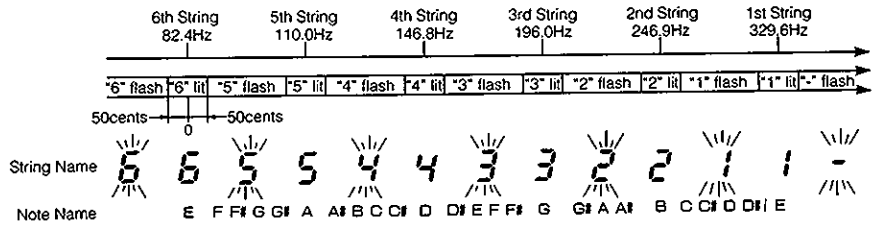


The display may look a little different than this, depending on the settings described in "Changing Modes" on page 18.

● String Name Display

The name of the open string (on which the played note occurs) will also be displayed. If the played note is more than 50 'cents' off exact pitch, the string name will flash in the LED display. The flashing stops when you tune the note to within 50 cents of the exact pitch.

Here's what the display will look like when you play a note:



* You can disable the string name display by changing the mode setting. You may want to do this, for example, if you are using a non-standard tuning. See "Changing Modes" on page 18 for how to do this.

● Note Display

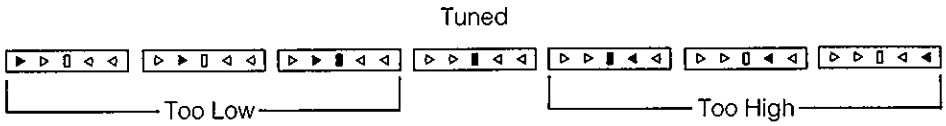
The input note name will be the same as that indicated by the effect button lights. The note name will display as follows:

C : C	E : E	G# : G°
C# : C°	F : F	A : A
D# : d	F# : F°	A# : A°
D# : d°	G : G	B : b

● Tuning Guide Display

When the input note is within 50 cents of the nearest reference note, the triangular tuning guide lights will indicate how flat or sharp it is. Watch these triangles and tune the string until only the central indicator lights.

✻ A half-step consists of 100 cents.



3. How to Tune

① Play the open string you want to tune.
The note closest to the one you played will be indicated in the LED display and by the button lights. The open string name will also be shown in the LED display.

② Tune the string until the string name stops flashing, which means you're within 50 cents of the correct pitch.

STRING	NOTE NAME	FREQUENCY
1st String Open	1E	329.6Hz
2nd String Open	2B	246.9Hz
3rd String Open	3G	196.0Hz
4th String Open	4D	146.8Hz
5th String Open	5A	110.0Hz
6th String Open	6E	82.4Hz

③ Now you can use the tuning guide lights to tune up until only the central indicator lights.

Repeat Steps ① through ③ until all strings are tuned up.

✻ If your guitar has a tremolo arm, you know that tuning one string by an appreciable amount can cause the others to go slightly out of tune. So you'll have to get your guitar roughly in tune to begin with, tuning each string only until the string name stops flashing. Then you can go back and tune each string precisely.

4. Customizing the Tuner

You can make settings that will customize the tuner to suit your needs. The settings include:

1) changing the standard pitch
2) changing modes
3) changing the output level

The settings are made in Tuner mode.

◆ Whenever You Press [PLAY]...

Press [PLAY] to store the settings and return to play mode.

1) Changing the Standard Pitch

The LED display will show the standard pitch. If you need to, you can change this anywhere from 435 Hz to 445 Hz. The new standard pitch will be stored until you change it again.

* The factory preset is A=440 Hz.
* When you enter tuner mode, the standard pitch will be displayed for about a half second.

① Check to see that you are in Tuner mode (the Tuner button light will be on).

② Press [PITCH (ASSIGN)]. The current standard pitch will be shown in the LED display.
* If all you want to do is check the current standard pitch, press [PITCH (ASSIGN)] or [TUNER] when you want to return to Tuner mode.

③ Using the shuttle dial, change the standard pitch.

④ Press [PITCH (ASSIGN)] or [TUNER] to store the setting and return to Tuner mode.

2) Changing Modes

You can switch between regular and flat tuning, and string name display on/off. The settings will be stored until you change them again.

〈Flat (Double Flat) Tuning〉

Flat tuning is a semi-tone below regular tuning. The LED display will still show the notes as if it were regular tuning, but the absolute pitch will be a half-step lower. This makes it easier to tune and play in flat keys. Double flat tuning is the same thing only a whole tone lower than absolute pitch.

* The lights on the effects buttons still indicate absolute pitch. In flat (double flat) tuning, notes will be a semi-tone (whole tone) lower than the note name in the LED display.
* The factory default is String Name Display On/Regular Tuning.
* For pitches between notes, the mode settings will be shown in the LED display.

① Check to see that you're in Tuner mode. (The Tuner button light will be on.)

② Press [MODE (MAX)]. The present setting will be displayed.

* If all you want to do is check the current mode, press [MODE (MAX)] or [TUNER] when you are ready to return to Tuner mode.

③ Using the shuttle dial, change the setting.

The different modes are indicated as follows:

String Name Display Off/Regular Tuning " - - "
String Name Display On/Regular Tuning "- - - "
String Name Display On/Flat Tuning "- -.- "
String Name Display On/Double Flat Tuning "- - -."

④ Press [MODE (MAX)] or [TUNER] to store the setting and return to Tuner mode.

3) Changing the Output Level

The output level in Tuner mode is shown in the LED display. If you want to, you can change this level so that you can hear the guitar while tuning (in Tuner mode, only the direct guitar sound is output). The setting will be stored until the next time you change it.

* Factory default is 0 (Mute).

① Check to see that you're in Tuner mode (the Tuner button light will be on).

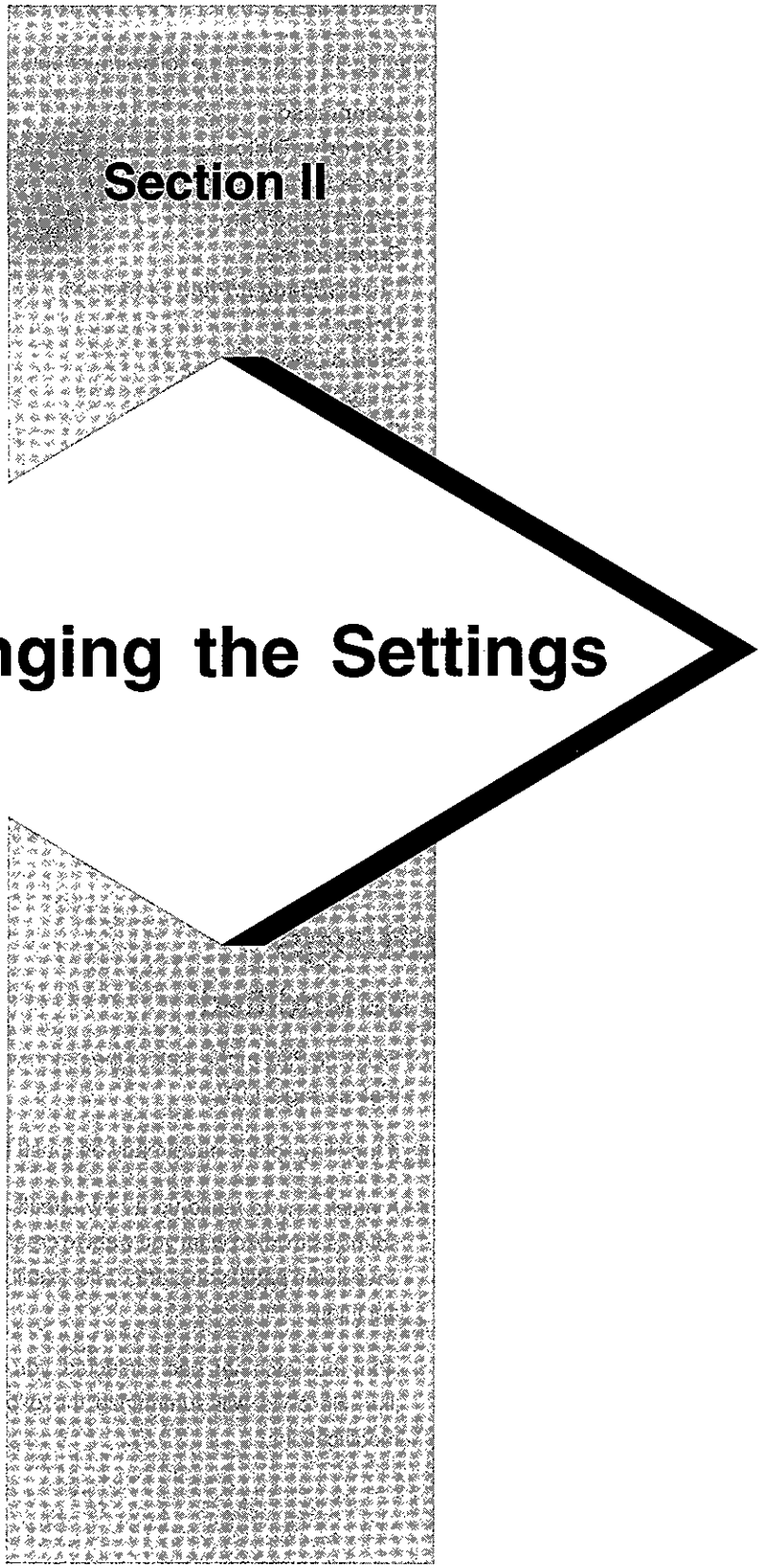
② Press [LEVEL (MIN)]. The present output level setting will be displayed.

* If all you want to do is check the current output level, press [LEVEL (MIN)] or [TUNER] when you want to return to Tuner mode.

③ Using the shuttle dial, change the setting.

④ Press [LEVEL (MIN)] or [TUNER] to store the setting and return to Tuner mode.

MEMO


Section II
Changing the Settings

With just a few easy operations you can modify the effects settings in any way you like, and store the changes in memory. This section explains how to do that.

The ME-10 includes the following effects:

Compressor
Overdrive/Distortion
Noise Suppressor
Effects Send/Return *1
Equalizer *2
Phaser/Flanger/Pitch Shifter *3
Delay
Stereo Chorus
Stereo Reverb
Guitar Amp Simulator

*1: This is an on/off control for external devices connected to the Send/Return jack.
*2: There is a setting here that will let you use an Expression Pedal (connected to the EXP. PEDAL 1 jack) as a wah-wah pedal.
*3: You can use only one of these three effects in any one patch.

The overall effect sound depends on which effects are turned on, and what the parameter settings are. (Parameters are the basic variable elements of an effect that control what it sounds like).

* If you turn off the power or return to Play mode in the middle of changing settings, all the changes you have made up to that point will be lost. You have to save new changes in a patch, as described in "Write Operation" on page 29.

■Making Effect Settings

1. Selecting the Patch to be Modified

① From the Play mode, select the patch you want to modify. (We discussed how to do that on page 11.)

* If the Play light is not already on, push the Play button at this time.

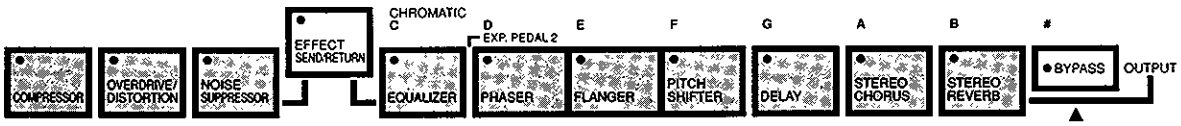
* A quick way to make up a new effects sound is to first select a patch that already sounds similar to what you want to create. That way, if you modify the patch but don't save it, the patch you started with is still stored in patch memory and you haven't lost anything.

After the patch has been selected, you can modify the parameters in any order you like. Here we will summarize the explanations and directions for making these modifications.

2. Effect On/Off

This turns each effect on or off. You can easily check to see whether an effect is on or off at any given moment by looking at the light on the effect button: if the effect is on, the light is on.

① Just press the effect button you want to turn it on and off.



* When you make any changes to a patch, the Play button light will go out to indicate that the patch is no longer the same as the one stored in memory.
* If no parameters are selected and you turn an effect on or off, you will see a "---" in the LED display.

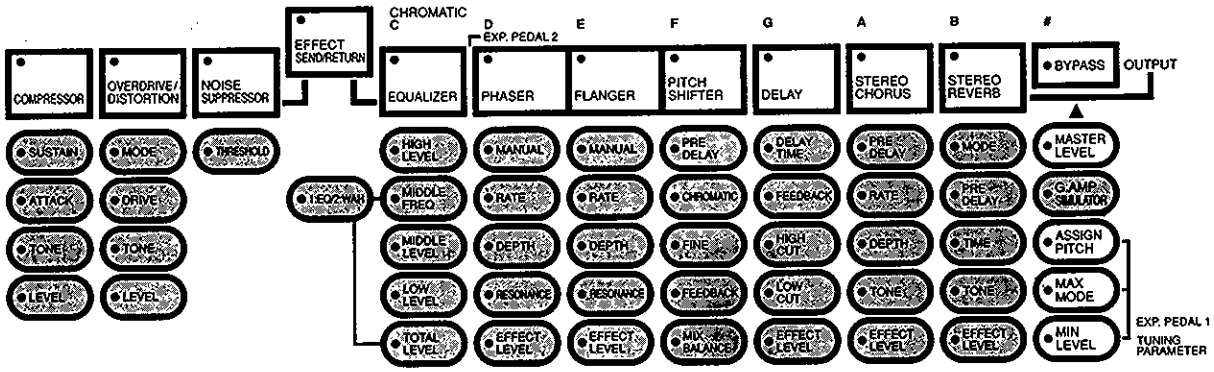
The new setting is only temporary, however, and is lost if you turn the power off or press the Play button to return to Play mode. You have to save any changes you make in a patch using the "Write Operation" described on page 29.

⟨⟨Selecting Phaser/Flanger/Pitch Shifter⟩⟩
You can only use one of these three effects in any one patch.
Press the button for the one you want and its light will come on to indicate the effect is on. If you want to turn all three effects off, press the button that is currently lit to turn it off.

3. Setting the Parameters

Each effect has its own special parameters, and by changing these values you can alter the effect and create new sounds. The parameters are indicated on the panel buttons.

① Select the parameter you want to change by pressing the parameter button. The button will light and the current setting for that parameter will be shown in the LED display.



* When you make any changes to a patch, the Play button light will go out to indicate that the patch is no longer the same as the one stored in memory.
* You can modify the parameters of an effect that is currently turned off. When you press the parameter button the current setting will flash in the LED display to indicate that the effect is off.
* To find out what each parameter does, see Section III: The Effects.

② Modify the setting with the shuttle dial.

Rotate the shuttle dial clockwise to increase the values, and counter-clockwise to decrease them. There are four different display speeds; the further you rotate the dial, the faster the numbers change.

* Take it easy with the shuttle dial and it will continue to work well for you.

Repeat Steps ① and ② to modify all the parameters you want.

The new parameters settings are only temporary, however, and are lost if you turn the power off or press the Play button to return to Play mode. You have to save any changes you make in a patch using the "Write Operation" described on page 29.

4. Other Parameters Stored in a Patch

In addition to the parameters that control the sound of the effects, the following can also be stored in memory as part of a patch.

1) Effect Send/Return (page 25)
This determines whether signals will pass through an external device connected to the Send/Return jack.

2) Expression Pedal settings (page 26)
When you have an Expression Pedal connected to the ME-10, you can use it for real time control over some parameters. This setting determines what parameter will be controlled by the pedal.

3) Master Level (page 27)
This is the final adjustment to the output level at the Output jacks.

1) Effect Send/Return

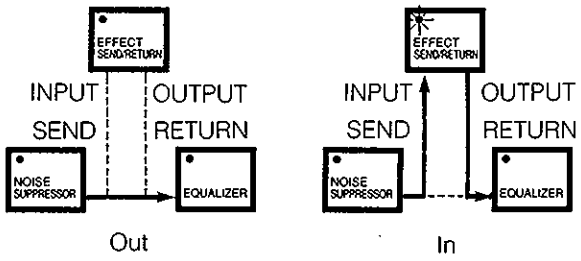
This inserts the external device connected to the Send/Return jack into the signal path (between the Noise Suppressor and Equalizer). Whether the external device is in the path or not can be stored as part of a patch along with the settings for the ME-10's internal sounds.

The Effect Send/Return setting is indicated by the light on the button: if the light is on, the external effect is in the signal path.

* Be sure the external effect is turned on!
* See "Making the Connection" on page 10 for how to connect external devices.

It's an easy, one-step operation:

① Press the button to take the effect in and out of the signal path.



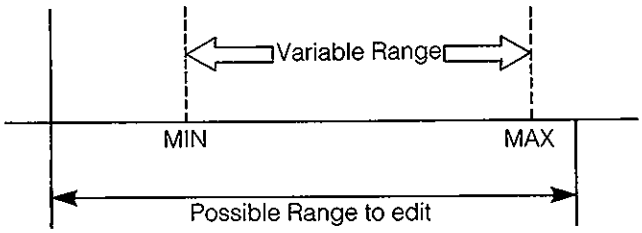
* When you make any changes to a patch, the Play button light will go out to indicate that the patch is no longer the same as the one stored in memory.
* If no parameters are selected and you turn an effect on or off, you will see a "---" in the LED display.

The new settings are only temporary, however, and are lost if you turn the power off or press the Play button to return to Play mode. You have to save any changes you make in a patch by using the "Write Operation" described on page 29.

2) Expression Pedal Settings

If you have an Expression Pedal connected to the EXP. PEDAL 1 jack, you can change the value of the selected parameter "on the fly", by depressing the pedal as you play. These settings determine which parameter will be controlled, and the minimum and maximum values of the parameter range.

These last two settings determine what the value of that parameter will be when the pedal is all the way up (minimum) and when it's all the way down (maximum). Graphically, this would look like the following:



* The new values for the pedal position take effect the instant you switch to a patch that includes these parameters.
* See Section III "The Effects" (page 35) for more about what parameters can be assigned in this way.

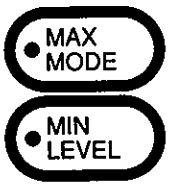
① Assign which parameter is to be controlled by the Pedal.
Press the [ASSIGN] button, and the light for the parameter which is currently assigned to the Pedal will flash. Use the shuttle dial to assign a new parameter to be controlled.

* If no parameter is currently assigned, the LED display will read "OFF". Moving the shuttle dial changes this to ON and the lights for the parameters which can be assigned to the Pedal will flash in order.
* Set this to OFF for patches in which the Expression Pedal is not to be used. Otherwise, when you switch to a patch you may wind up controlling a parameter you didn't intend to.
* With the Epression Pedal connected, when you are modifying a parameter value (selected by Assign), the setting value and "-A-" are alternately shown in the display to indicate what is being controlled by the pedal. At this point, you are actually changing the setting value, although you will not hear the sound itself change.

② Set variation range (min. and max.) of the parameter being controlled by the Pedal.

Press [MIN] to display the current minimum value and use the shuttle dial to set it.

Press [MAX] to display the current maximum value and use the shuttle dial to set it.



* After this, any changes you make to this parameter could conceivably change the minimum and maximum values. Therefore, the last thing you should do when modifying a parameter that is controlled by the Expression Pedal is to check the variation range.
* You can set a minimum value which is larger than the maximum! In this case, the parameter value becomes smaller the further down you depress the Pedal (i.e., it works in the opposite way).
* If there is no Expression pedal hooked up, all parameters are controlled exclusively by the settings.

These new settings and assignments are temporary, and if you turn the power off or interrupt the operations by going back to Play mode, they are lost. You have to save your modified settings in a patch with the "Write Operation", as described on page 29.

3) Master Level

This adjusts the overall output level of the Output jacks on the ME-10.

When all effects are off, setting the Master Level to 70 makes the output level the same as the input level.

* The Master Level setting can be controlled with the Expression Pedal as well. Check out page 26, "Expression Pedal Settings", to see how this is done.

The Master Level is set the same way as the other parameters.

① Press the Master Level button. The light will come on, and the present setting will be displayed.

② Use the shuttle dial to modify the value.

* The shuttle dial will work best if you rotate it gently rather than snapping it around.

5. Canceling a Setting

If you just want to return to Play mode in the middle of changing settings without saving anything in memory, just press [PLAY], or select a new patch.

〈Pressing [PLAY]〉

① Press [PLAY].
The Play button light will flash, and the current patch will be shown in the LED display and Number pedal lights.

* The Play button flashes to warn you that any setting changes you have made will be lost if you go through with this operation. To continue making settings, press the button for the next parameter you want to change.

* If all you wanted to do was display the settings and you didn't change anything, pressing [PLAY] returns you immediately to Play mode and you can skip áA.

② Press [PLAY] again.
The Play button will stop flashing and remain lit, indicating that you are now in Play mode. All the changes you made to the settings are lost and the original values returned.

〈Selecting a Patch〉

① Push either a Number pedal, Bank pedal or the Group button.
The Play button light will start to flash, and the LED display and Number pedal lights will indicate the current patch.

* The Play button flashes to warn you that, at this point, any setting changes you have made will be lost if you carry out step 2. If you don't want this to happen yet, press a parameter button.

② Select a new patch.
As soon as you switch to this new patch, you will be in Play mode again. All the changes you made to the settings are lost and they revert to their original values.

See "Selecting a Patch" on page 11 for more information about selecting patches.

■The Write Operation

Let's say you've made some changes to the settings of a patch and you'd like to keep them. You can save the changes in a patch, either by overwriting the existing patch with the new settings, or saving it in a different patch (leaving the original unaltered). Or you can copy the changes to a Manual mode setting. Here's how.

Saving the changes.

① Press [WRITE].

The display and pedal lights will flash, showing the current patch.

* To cancel the write operation, press any one of the parameter buttons. You'll be returned to the parameter setting mode.

⟨If you want to overwrite the original patch⟩

If you do not specify a new patch at this point, you will erase the original patch and replace it with the new one.

② Press [WRITE] again. The patch is now stored in memory. After this operation is finished, the Play button light will come on, and you are in normal Play mode again.

⟨If you want to save the original patch⟩

② Select a destination patch.

When you select a save destination patch, the display and pedal lights will change to show the settings of that patch.

See "Selecting a Patch" on page 11 if you need a refresher.

③ Press [WRITE]. The patch you just finished modifying will be saved in the selected patch number. When that's done, the Play button light will come on and you will be in Play mode with the new patch already selected.

⟨Saving to a Manual Mode Setting⟩

The patch you modified can also be saved to a Manual mode setting (see page 34 for more about Manual mode).

② Press [MANUAL].

You'll see *0-0* in the display, indicating that the copy point is a Manual mode setting.

* If you change your mind after pressing [MANUAL], just select a new patch to copy to that patch instead.

③ Press [WRITE] again.

The patch is now saved to a Manual setting. After that's done, the Manual button light will come on, and you will be in Manual mode.

■Copying

So far we've talked about saving a modified patch. But suppose you just want to copy a patch the way it is? The following explains how to do just that. This operation can also be used to copy a patch to a Manual mode setting, or vice versa.

⟨Copying a Patch to a Different Patch Number⟩

① In Play mode (Play button light is on), select the patch to copy.

* ✻ See page 11 if you need a refresher on selecting patches.
* ✻ If the light is not already on, press [PLAY] to turn it on.

② Press [WRITE]. The display and pedal lights will reflect the settings for the "copy from" patch you just selected.

③ Select the patch number to copy to.

* ✻ To cancel the Copy operation at this point, press [PLAY]. You'll be returned to Play mode.

④ Press [WRITE] again.
The "copy from" patch will be copied to the patch selected in ①. The Play button light will come on and you'll be returned to Play mode with the "new" patch selected.

⟨Copying a Patch to a Manual Setting⟩

① In Play mode (Play button light is on), select the patch to copy.

* ✻ See page 11 if you need a refresher on selecting patches.
* ✻ If the light is not already on, press [PLAY] to turn it on.

② Press [WRITE]. The display and pedal lights will reflect the settings for the "copy from" patch you just selected.

③ Press [MANUAL]. The display will read *0-0* to indicate the "copy to" point is a Manual mode setting.

* ✻ If you change your mind after pressing [MANUAL], just select a new patch to copy to that patch instead.
* ✻ To cancel the Copy operation at this point, press [PLAY]. You'll be returned to Play mode.

④ Press the [WRITE] button again.
The patch settings will be copied to Manual settings. After this is done, the Manual button light will come on and you will be in Manual mode.

⟨Copying a Manual Setting to a Patch⟩

① Press [MANUAL] to switch into Manual mode.

② Press [WRITE]. The display and pedal lights will flash to show the settings for the patch in memory.

③ Select the patch to copy to.

* ✻ See page 11, "Selecting a Patch", if you've forgotten how to do this.
* ✻ To cancel the Copy operation at this point, press [PLAY] to return to Play mode.

④ Press [WRITE] again.
The Manual settings will be copied to the patch selected in ③, after which the Play button light will come on and you'll be returned to regular Play mode with the "copy to" patch already selected.

■Manual Mode

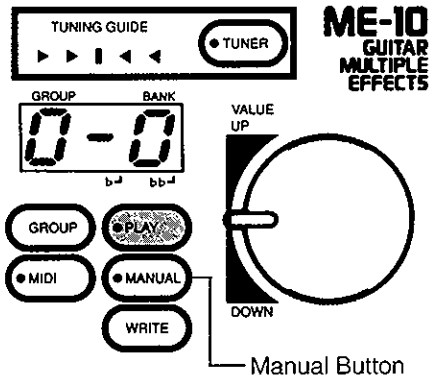
You can save effects settings either in a patch, or to an entirely separate Manual mode setting.
"Manual mode" means that each Bank/Number pedal can be used to switch effects on and off, enabling you to play the ME-10 as if it were a series of compact "pedal" effects.

When you select Manual mode, the settings for each effect are as they were the last time you were in Manual mode.

1. Selecting Manual Mode

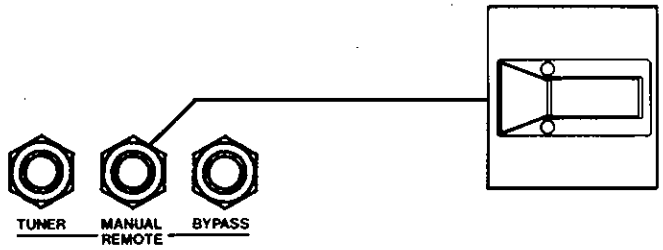
☐ Using the Panel Button

Each press of the [MANUAL] button turns Manual mode on or off. When Manual is on, the button is lit.



☐ Using a Footswitch

If you have an optional FS-5U footswitch connected to the MANUAL REMOTE jack, each press of the footswitch will turn Manual mode on and off.



◆ Whenever You Press [PLAY]...

Press [PLAY] to cancel Manual mode and return to Play mode. You'll hear the effect sound for the currently selected patch.

* Even if you are using the Tuner or Bypass in Manual mode, when you press [PLAY] you are returned straight to Play mode and the selected patch sound, with all Tuner and Bypass settings canceled.

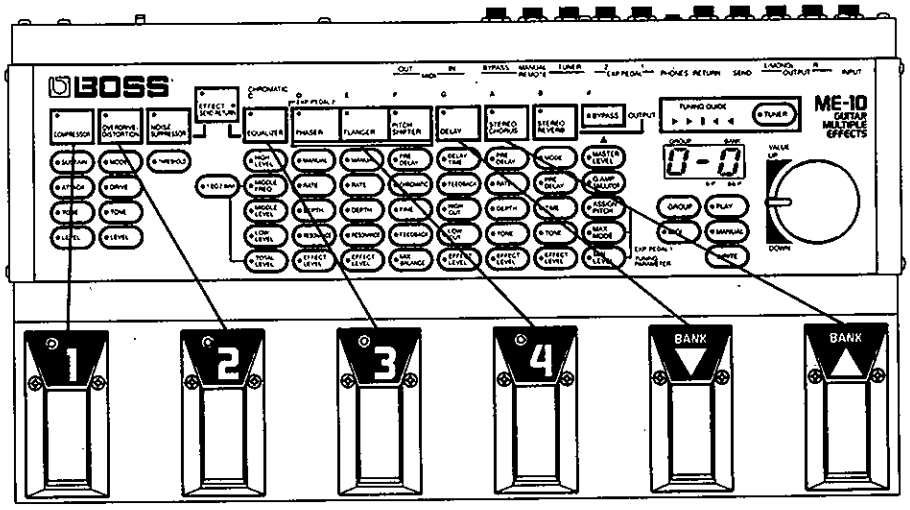
2. Manual Mode Operations

Here's how to work the various effects in Manual mode.

1) Switching Effects On and Off

In Manual mode, the Bank and Number pedals become the switches you use to turn effects on and off.

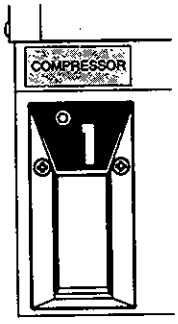
The Bank and Number pedals are assigned to effects as follows:



COMPRESSOR | OVERDRIVE/ DISTORTION | EQUALIZER | PHASER/ FLANGER/ PITCH SHIFTER | DELAY | STEREO CHORUS

When in doubt, check the light above each effect button to see if it is on or off.

* You can't switch among the Noise Suppressor, Effects Send/Return or Stereo Reverb using the pedals. Those have to be turned on and off with the buttons on the panel.
* And of course, any of these effects can still be turned on and off using the panel buttons as well.
* We have included some labels that you can stick on the Bank and Number pedals if you want to make it easier to remember which effect is assigned to which pedal.



2) Changing Parameters

Each effect setting can be modified in real time, meaning the changes take effect as soon as you make them. In addition, the changes are automatically stored and recalled, every time you enter Manual mode.

① Indicate the parameter to be modified.
Press the appropriate parameter button. The light will come on and the current setting will be shown in the LED display.

* If that effect is currently turned off, the setting in the LED display will flash. And even though it's turned off, you can still modify it.

② Make your changes with the shuttle dial. Rotate the shuttle dial clockwise to increase the values, and counter-clockwise to decrease them. There are four different display speeds; the further you rotate the dial, the faster the numbers will change.

Repeat Steps ① and ② to modify all the paramenters you want.

* Other operations for modifying these parameter values will be the same as for regular patch editing. For details, see "Setting the Parameters" on page 24.

3) Changing the Expression Pedal Assignment

With an optional Expression Pedal connected to EXP.PEDAL1 jack, you can edit a selected parameter "on the fly", with every movement of the pedal resulting in a change to the parameter.

* Be sure to set the pedal connected to the EXP.PEDAL1 jack to minimum volume.
* As for any pedal you may have connected to the EXP. PEDAL 2 jack, see "Using Expression Pedal 2" on page 34.

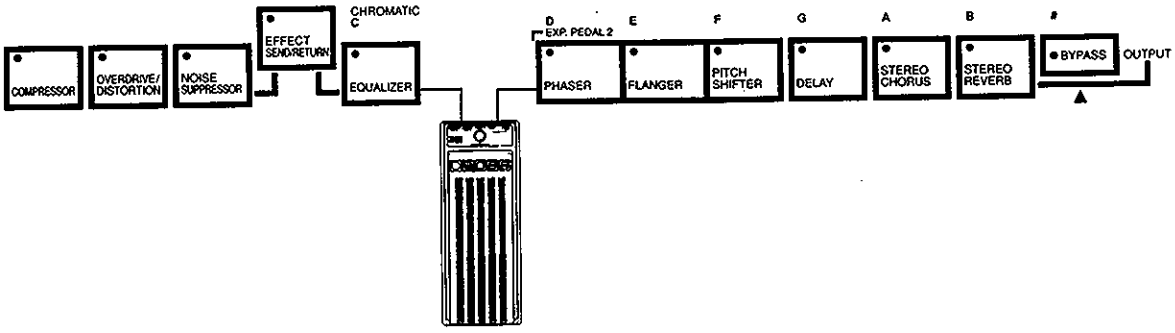
① Specify the parameter you want to control with the Pedal.
When you press [ASSIGN], the button light will flash to indicate the parameter which is currently controlled by the Pedal. Specify a new parameter using the shuttle dial.
* If no parameter is currently selected, the LED display will read "OFF".

② Set the parameter's minimum and maximum values.
Press [MIN] to display the current minimum value and change it with the shuttle dial. Do the same for [MAX].

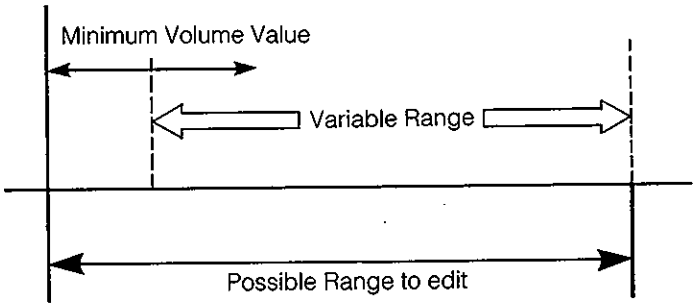
* Other operations for modifying the Pedal assignment will be the same as for regular patch editing. For details, see "Expression Pedal Settings" on page 26.

■Using Expression Pedal 2

If you have an Expression Pedal connected to EXP.PEDAL2 jack, you can use it to adjust the input level to the Phaser/Flanger/Pitch Shifter. This level is controlled from a point in the signal path prior to the reverb and delay, so that even if you suddenly cut back on the level the sound will decay naturally.



When this Pedal is fully depressed, the volume remains unchanged at its input level. As you back off the Pedal, the volume is cut to the minimum set on the Pedal itself.



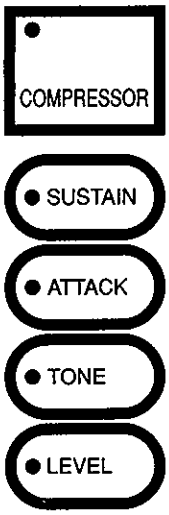
Section III

The Effects

With the ME-10 you can create your own sounds by combining effects and changing their parameters. In this section we'll tell you about what each of the effects does, and what changes you can make with the parameters.

* If a parameter has an <ASSIGN> setting, that means you can control the value of that setting in real time using the Expression Pedal. See "Expression Pedal Settings" on page 26.

☐ COMPRESSOR (Analog)



This effect "compresses" high input signals and "expands" low input signals (i.e., makes loud sounds a little softer and softer sounds a little louder). By making the overall volume more uniform, a distortion-free sustain effect is produced.

● SUSTAIN

<ASSIGN> (0 to 100)

Expands low input signals and adjusts the range (time) over which the volume is made more uniform. Larger values mean longer sustain. With smaller values of this parameter, this effect can be used as a "limiter" to suppress only the highest input signals.

● ATTACK

<ASSIGN> (0 to 100)

Adjusts the 'picking' time and attack intensity. Larger values make the start of each note cleaner and improve articulation of the sound.

● TONE

<ASSIGN> (-50 to 50)

This adjusts the tone of the Compressor. Positive values boost the treble, and negative values cut it.

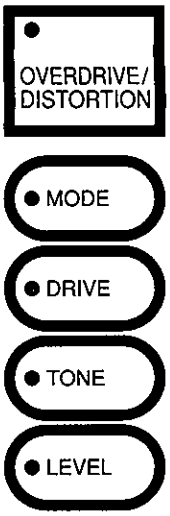
● LEVEL

<ASSIGN>(0 to 100)

This parameter adjusts the volume of the compressor. This is used for adjusting the balance between effects as they are turned on and off.

☐ OVERDRIVE/DISTORTION (Analog)

This distorts the sound and gives it a long sustain. The different "modes" are different kinds of distortion effects that you can tailor to match your needs.



● MODE

<ASSIGN> (o-1/o-2/d-1/d-2)

Selects the distortion type. Overdrives 1 and 2 give you a mild distortion that sounds like it came from a tube amp. Distortions 1 and 2 give you a harder sound.

- o-1: Overdrive 1
- o-2: Overdrive 2
- d-1: Distortion 1
- d-2: Distortion 2

● DRIVE

<ASSIGN>(0 to 100)

This parameter adjusts the sound of the distortion. The larger this number, the more intense the distortion effect.

● TONE

<ASSIGN>(-50 to 50)

This parameter adjusts the tone color of the Overdrive/Distortion. Positive values boost the treble, making it brighter.

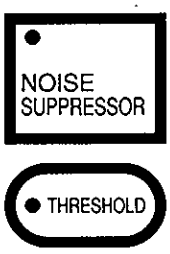
● LEVEL

<ASSIGN>(0 to 100)

This parameter adjusts the volume of the Overdrive/Distortion. This is used for adjusting the balance between effects as they are turned on and off.

☐ NOISE SUPPRESSOR (Analog)

Suppresses induced hum and noise from the guitar pickup. By taking into account the guitar sound 'envelope' (variation of volume over time of the guitar sound), we're able to reduce the noise, without affecting the resonance of your guitar. This creates a more natural sound.



● THRESHOLD

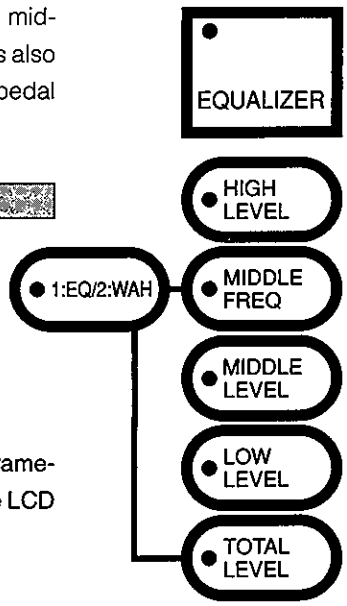
(0 to 100)

Adjustable for the noise level: high for high noise; low for low noise. Set this so that you can hear the guitar notes decay naturally.

* If the threshold is set too high, it may cut out soft guitar notes as well as noise! (This might be the problem if you are playing and nothing is heard.)

☐ EQUALIZER (Digital)

A three-band equalizer with a parametric EQ in the mid-range (the most important range for a guitar). There's also a special setting you can use in conjunction with a pedal to create a wah-wah effect.



● 1:EQ/2:WAH

(1/2)

Selects either the three-band equalizer, or the special equalizer which gives you the wah-wah effect.

[1]: Three-band equalizer

[2]: Wah-wah pedal

* When used as a wah-wah effect, the following parameter values cannot be set (you will see a "- - -" in the LCD display).

  High Level

  Middle Level

  Low Level

● HIGH LEVEL

(-12 to 12:dB)

This parameter adjusts the treble. Positive values boost treble, negative values cut it.

● MIDDLE FREQUENCY

EQ: 200Hz/250Hz/315Hz/400Hz/500Hz/630Hz/800Hz/1.00kHz/1.25kHz/1.60kHz/2.00kHz

Wah: <ASSIGN> (0 to 100)

EQ: Sets the center frequency in the mid-range that will be adjusted by the Middle Level control.

WAH: Simulates the position of the wah-wah pedal.

[ASSIGN]

You can assign the wah-wah effect to Expression Pedal 1 by making the following settings:

1:EQ/2:WAH to 2

ASSIGN to MIDDLE FREQ

MAX to 100

MIN to 0

● MIDDLE LEVEL

(-12 to 12:dB)

This parameter adjusts the mid-range level. Positive values boost the level, negative values cut it.

● LOW LEVEL

(-12 to 12:dB)

This parameter adjusts the bass. Positive values boost the bass, negative values cut it.

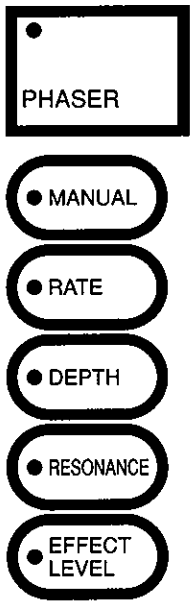
● TOTAL LEVEL

(-12 to 12:dB)

This parameter adjusts the volume of the Equalizer. It is used for adjusting the balance between effects as they are turned on and off.

□ PHASER (Digital)

This effect takes the direct sound, shifts the phase slightly and adds an out-of-phase signal to the direct guitar sound. This produces a "vibrato" effect similar to the sound of a rotating speaker.



● MANUAL

<ASSIGN> (0 to 100)

By adjusting this Manual setting, you can vary the central frequency to which the phaser effect is applied. Lower values give you a lower central frequency, higher values a higher central frequency.

● RATE

<ASSIGN> (0 to 100)

Adjusts the period of the vibrato. Increasing this value increases the rate of vibrato.

● DEPTH

<ASSIGN> (0 to 100)

Adjusts the depth of the vibrato. Higher values create a more pronounced effect.

● RESONANCE

<ASSIGN> (0 to 100)

Adjusts the phaser resonance (feedback volume).

Higher values increase the intensity of the phaser effect.

● EFFECT LEVEL

<ASSIGN> (0 to 100)

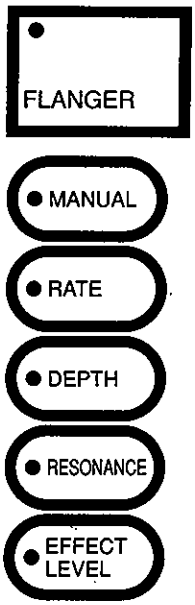
Adjusts the effect level. The higher the value, the louder the effect sound.

At 100 the direct and effect sounds are at the same level.

* This parameter is usually set at 100.

☐ FLANGER (Digital)

The direct guitar sound is electronically delayed and added back to the original sound to produce a broad, sweeping effect. You can tailor this effect to create sounds from a "jet phaser" to an easy vibrato.



● MANUAL

(0 to 100)

By adjusting this Manual setting, you can vary the central frequency to which the flanging effect is applied. Lower values set a lower central frequency, while higher values set a higher central frequency.

● RATE

<ASSIGN> (0 to 100)

Adjusts the rate of the sweep. Higher values create a faster sweep.

● DEPTH

<ASSIGN> (0 to 100)

Adjusts the depth of the sweep. Higher values create a broader sweep.

● RESONANCE

<ASSIGN> (0 to 100)

Adjusts the flanger resonance (feedback volume). Higher values increase the phase shift, enhancing the flanging effect.

● EFFECT LEVEL

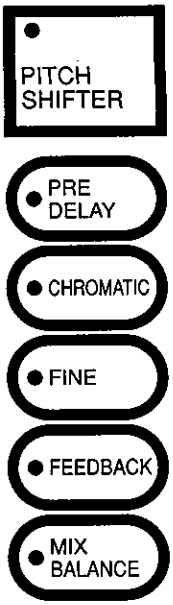
<ASSIGN> (0 to 100)

Adjusts the effect level. The higher the value, the louder the effect. At 100 the direct and effect sounds are at the same level.

✻ This parameter is usually set at 100.

□ PITCH SHIFTER (Digital)

The Pitch Shifter lets you actually change the pitch of notes played by as much as one octave.



● PRE DELAY

(0 to 100:ms)

This adjusts the time difference between output of the direct and effect sounds. Usually this is set to 0 ms, but by increasing Feedback and lengthening the Pre Delay you can get an interesting effect where each note is followed by a decaying series of notes, each one rising (or falling) slightly in pitch. Try it!

* Although the pre delay may be set to 0 ms, in reality it takes the pitch shifter a fraction of a second to process and shift the note, so there will be a brief delay before the effect sound is heard.

● CHROMATIC

<ASSIGN> (-12 to 12:semitones)

This adjusts the amount of pitch shifting in semitone steps, to a maximum of +/- 1 octave.

[ASSIGN]

With this parameter you can control pitch shifting with the Expression Pedal. (Sort of like playing a guitar with a tremolo arm.)

● FINE

(-50 to 50)

Makes fine adjustments in pitch shift.

* This interval (from -50 to 50) corresponds to one semitone in pitch.

● FEEDBACK

<ASSIGN> (0 to 100)

Adjusts the effect feedback level. Because pitch shift is applied each time the sound is fed back into the circuit, increasing the value produces a gradual rise in pitch.

● MIX BALANCE

<ASSIGN> (-50 to 50)

This adjusts the balance between the direct and effect sounds.

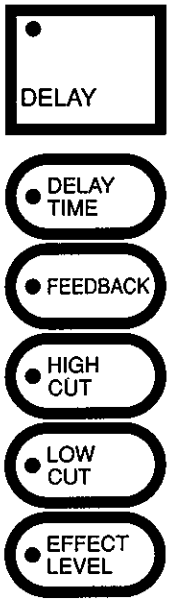
[+]: The higher the value, the greater the proportion of effect sound. If this is set to 50, only effect sound is output.

[0]: Direct and effect volumes are equal.

[−]: The higher the value, the greater the proportion of direct sound. If this is set to -50, only direct sound is output.

☐ DELAY (Digital)

Electronically 'delayed' sounds are added to the direct sounds from the guitar. Using Delay fattens the sound, and can be used for special effects as well.



● DELAY TIME

<ASSIGN> (1ms to 1.2s)

This parameter adjusts the delay time. Delay times are shown in the display as follows:

1 ms to 999 ms: *1* to *999* (in units of milliseconds)

1.00 s to 1.20 s: *1.00* to *1.20* (in units of seconds)

✻ There is a certain amount of noise generated by the Expression Pedal when used as a controller.

● FEEDBACK

<ASSIGN> (0 to 100)

Adjusts the feedback volume of the delayed sound. Larger values mean more and more repeats of the sound, while a setting of '0' gives you a single repeat of the delayed sound.

● HIGH CUT FILTER

(-12 to 0)

This adjusts the amount of treble cut in the effect sound. A value of 0 indicates no cut -- the tone is unchanged.

● LOW CUT FILTER

(-12 to 0)

This adjusts the amount of bass rolled off the effect sound. A value of 0 indicates no roll-off -- the tone is unchanged.

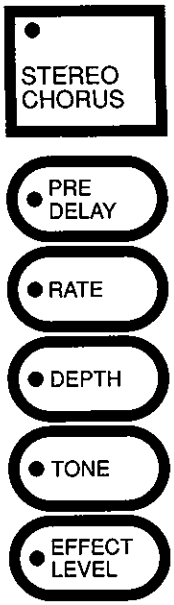
● EFFECT LEVEL

<ASSIGN> (0 to 100)

This parameter adjusts the volume of the delayed sound. Larger values boost the volume of the delayed sound, and at '100' the direct and delayed volumes are almost the same.

□ STEREO CHORUS (Digital)

The chorus effect adds depth and warmth to sounds.



● PRE DELAY

(1 to 60:ms)

This adjusts the amount of time between the output of the direct and effect sounds. A longer pre delay creates a more pronounced "doubling" effect.

● RATE

<ASSIGN> (0 to 100)

Adjusts the speed of the chorus. Higher values create a faster chorusing effect.

● DEPTH

<ASSIGN> (0 to 100)

Adjusts the depth of the chorus. Higher values create a deeper chorusing effect.

● TONE

(-12 to 12)

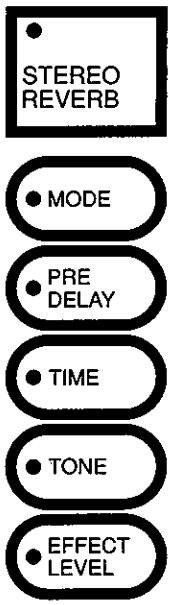
Adjusts the tone quality of the effect sound. Positive values boost the treble, while negative values cut it, producing a warmer chorus sound.

● EFFECT LEVEL

<ASSIGN> (0 to 100)

This adjusts the volume of the effect sound. Larger values increase the amount of effect sound, and at '100' the direct and effect volumes are equal.

☐ STEREO REVERB (Digital)



Reverb is the complex reflection of sound which builds up naturally in any room or hall. For example, if you clap your hands outdoors, you just hear the clap. But when you clap your hands in a church, for example, there is a lingering echo-like sound call the reverberation or reverb. The sound of the reverb depends on the size of the space (room, hall, etc.) and the shape and material of the reflecting surfaces (such as the walls).
All these elements are digitally simulated in the ME-6.

● MODE

(h-1/h-2/r-1/r-2/P-1/P-2)

This sets the Reverb Mode. With this setting, you can produce a variety of different room simulations.

- h-1: Hall 1
  Simulates the clear reverb sound of a concert hall.
- h-2: Hall 2
  Simulates the reverb of a concert hall; a well controlled reverb sound.
- r-1: Room 1
  Simulates the bright reverb of a very 'live' room.
- r-2: Room 2
  Room 1 simulates a rather dead-sounding room without much resonance.
- P-1: Plate 1
  Simulates a plate reverb (an early but popular type of analog reverb that used electrically-charged vibrating plates). The treble is expanded to give it a metallic resonance quality.
- P-2: Plate 2
  These simulate plate reverb.
  Mid-range resonance is especially pronounced in Plate 1.

● PRE DELAY

(0 to 150:ms)

This adjusts the amount of time between the output of the direct and effect sounds.

● TIME

<ASSIGN> (0 to 100)

This parameter adjusts the reverberation time. Larger values correspond to longer reverberation time.

● TONE

(-12 to 12)

This parameter adjusts the tone quality of the reverb sound. Positive values emphasize the treble and make it brighter, while negative values soften the sound.

● EFFECT LEVEL

<ASSIGN> (0 to 100)

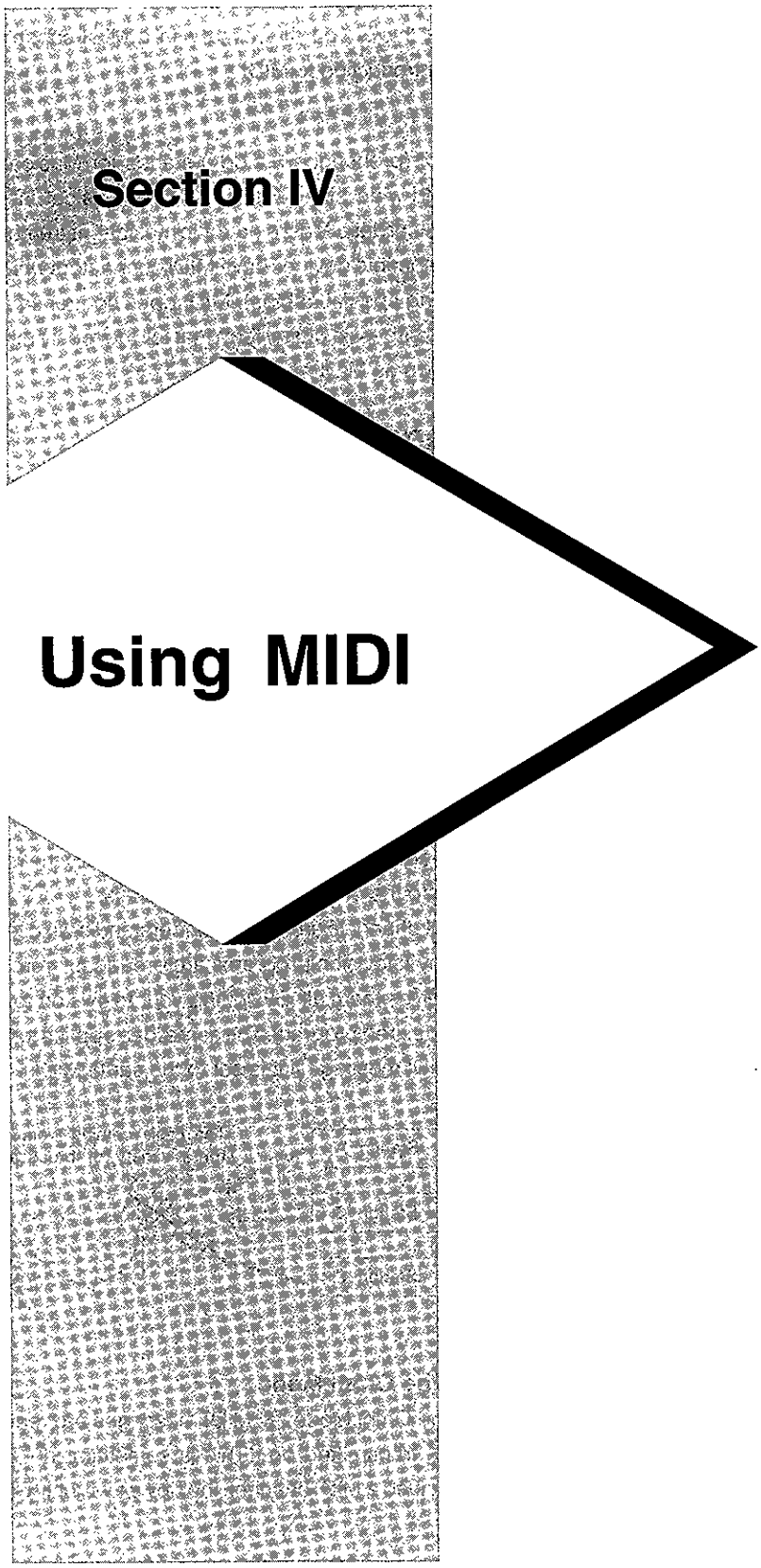
Adjusts the reverb volume.

□ GUITAR AMP SIMULATOR (Analog)

(On/Off)

This simulates the special qualities of a guitar amp. You can use this to get a guitar amp 'sound' while plugging directly into the Line In of your mixer.

MEMO


Section IV
Using MIDI

■About MIDI

The ME-10 is equipped with MIDI jacks that will enable you to exchange data with other MIDI devices.

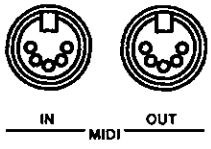
* If this is your first time with a MIDI-capable device, be sure to read the following introduction to MIDI.

MIDI (pronounced middy) stands for Musical Instrument Digital Interface. MIDI is a world-wide standard that allows musical instruments and computers to exchange musical data. Most electronic musical instruments sold today are MIDI compatible. MIDI compatible devices have MIDI connectors which are used to physically link instruments (using special cables). MIDI does not transmit the sound of an instrument, but rather 'messages' in digital form that tell the receiving instrument to "do something". These are known as MIDI messages.

1. Exchanging MIDI Messages

First, we'll explain in simple terms how MIDI messages are exchanged.

● About MIDI Jacks



MIDI messages are exchanged through three MIDI ports:

MIDI IN: Receives messages from external MIDI devices.

MIDI OUT: Transmits messages to external MIDI devices.

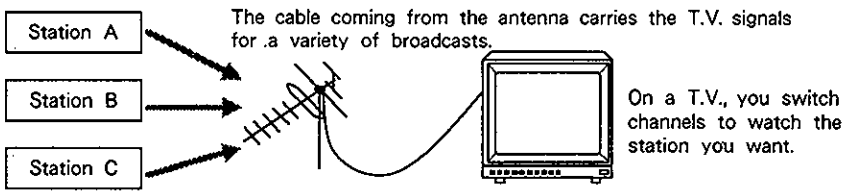
MIDI THRU: Re-transmits an exact copy of messages received via MIDI IN.

* The ME-10 has MIDI IN and MIDI OUT ports.

● MIDI Channels

With MIDI, a single cable can be used to transmit messages to several MIDI devices at one time, with each device receiving only the messages intended for it. This is possible due to the concept of MIDI channels.

MIDI channels are easy to understand if we use the analogy of television broadcasting. Many television programs are broadcast from many TV stations and your TV antenna receives them all. By setting your television to a specific channel, you can watch only the desired program. The same idea applies to MIDI channels. A device will only receive a MIDI message if it is set to the same MIDI channel as the transmitting device.


Station A
Station B
Station C
The cable coming from the antenna carries the T.V. signals for .a variety of broadcasts.
On a T.V., you switch channels to watch the station you want.

● The Omni Mode

In the Omni Mode, all MIDI messages are received regardless of which channel they were transmitted on. (This is something no TV set could ever do!) But if you have specified a MIDI channel, the device will only receive MIDI messages only that channel.

2. MIDI Messages Handled by the ME-10

MIDI messages are broadly divided into Channel Messages (those that have information specific to a channel), and System Messages (information that applies to the system as a whole).

〈Channel Messages〉

The MIDI messages that transmit the actual performance data are Channel messages. These messages are doing most of the work controlling the instrument. Different instruments may respond to different messages, however.

● Program Change Messages

Generally, 'patch changing messages' enable you to switch among as many as 128 different program numbers. On the ME-10, patch numbers correspond to program numbers as follows:

Patch number: 1-1-1 through 4-8-4

Program numbers: 1 through 128

〈System Messages〉

System Messages include SysEx (system exclusive) and messages needed for synchronization, diagnostics, and so on. The ME-10 handles SysEx messages only.

● System Exclusive Messages

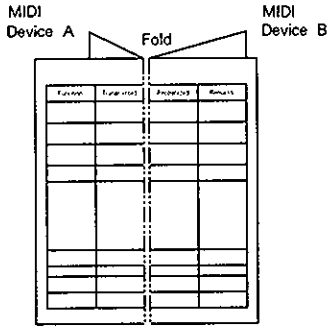
SysEx messages were designed to handle device-specific operations such as patch-switching. In general, all instruments made by the same manufacturer will be able to exchange SysEx messages. (SysEx messages are used to load and store effects settings to the BOSS BL-1 Bulk Librarian or a sequencer, or to transmit then to another ME-10).

When exchanging SysEx messages, you need to match the unit numbers of the transmitting and receiving devices. The unit number for the ME-10 is the same as its MIDI c hannel number.

MIDI Implementation Chart

MIDI has made it possible for a wide variety of devices to exchange information, but it is not always true that all types of MIDI messages can be exchanged between all types of devices. For example, if you use a synthesizer as a master device to control a digital piano, the pitch bender (the lever or wheel that modifies the pitch) of the synthesizer will have no effect on the sound of the piano.

To help you quickly determine what types of MIDI messages can be exchanged between two devices, the Operation Manual of each MIDI device includes a MIDI Implementation chart. By looking at this chart, you can quickly see what messages the device is able to transmit and receive. The left side of the chart lists the names of a variety of MIDI messages, and the Transmission and Reception columns use "o" and "x" marks to indicate whether or not each of these messages can be transmitted or received. This means that a specific MIDI message can be exchanged only if there is a "o" in both the Transmission column of the master and the Reception column of the slave. MIDI implementation charts are standardized, so you can fold the charts from two manuals together to see at a glance how the two devices will 'communicate'.



* For more detailed information about handling MIDI messages, refer to "About Roland SysEx Messages" on page 59, and "MIDI Implementation" on page 61.

■So, What Can You Do With MIDI?

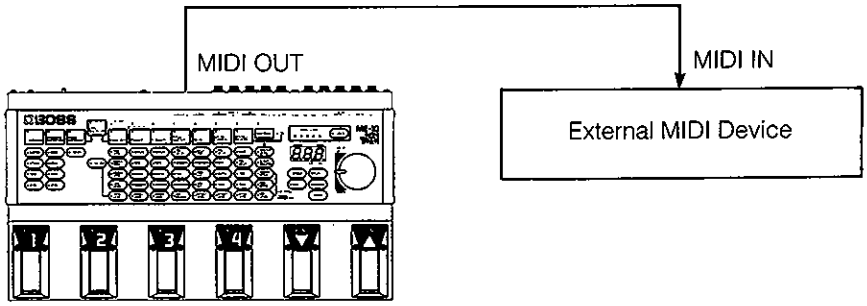
* Be sure to match the ME-10's MIDI channel setting with the channel of the connected MIDI devices, otherwise you won't be able to exchange messages.

1. Selecting Patches Via MIDI

You can use MIDI Program Change messages to switch patches on the ME-10 from an external MIDI device, or use the ME-10 to switch patches on an external MIDI device.

⟨⟨Switching Patches on External MIDI Devices⟩⟩

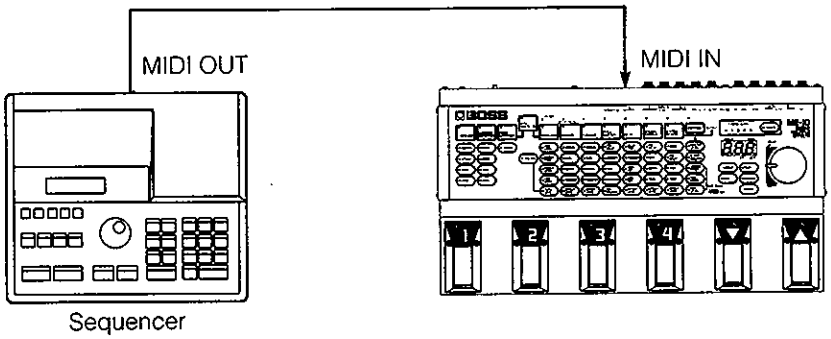
By making the connections shown below, you can select a patch on the ME-10 and simultaneously send out the corresponding Program Change message to the external MIDI device. That device will switch over to whatever patch or program on it corresponds to the received Program Change number.



* Remember to reset the MIDI channel if you need to. Refer to "MIDI Channels and Omni Mode" on page 51.

⟨⟨Switching Patches on the ME-10 from an External Device⟩⟩

With the connections shown below, you can play guitar along with automatic accompaniment from a sequencer. When you come to a point in the song where you want to switch patches on the ME-10, if you have included a Program Change message corresponding to the desired patch in the performance data, the patch will be automatically switched.



* The ME-10 factory preset setting is Omni ON.
  Don't forget to reset the MIDI channel when needed. Refer to "MIDI Channels and Omni Mode" settings on page 51.

2. Transmitting Data Via MIDI

Using Roland MIDI SysEx messages, you can transmit ME-10 effects setting to another ME-10, an optional BL-1 Bulk Librarian, or a sequencer.

* Refer to "Transmitting Data" on page 52, and "Receiving Data" on page 53.

■MIDI Channels and Omni Mode

If you want to transmit or receive MIDI data over a specific MIDI channel, you'll have to set it.

The factory default setting is Omni ON, so that you will receive all data regardless of which channel it was transmitted on. The ME-10 itself transmits MIDI data over Channel 1.

① Check to see that you're in Play mode. (The Play button light will be on.)

* If it's not, press the [PLAY] button to turn it on.

② Press the [MIDI] button. The current MIDI channel will be shown in the LED display.

* If Omni On is in effect, the display will look like the following:

③ Set the MIDI channel with the shuttle dial.

④ Press [PLAY].

The new MIDI channel is now registered. After this, the Play button will light indicating that you're back in Play mode.

■Transmitting Data

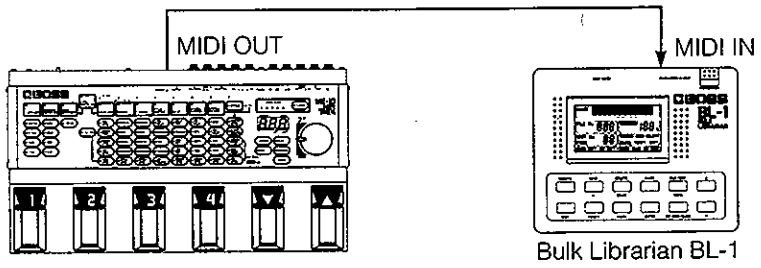
You can use SysEx data on the ME-10 to copy settings to another ME-10, or save effects settings to an optional BOSS BL-1 Bulk Librarian or sequencer. The transmitting of SysEx messages is called a "bulk dump", and receiving is called a "bulk load".

1. Transmitting Data (Bulk Dump)

<Making the Connections>

● Saving to a BL-1 Bulk Librarian or Sequencer

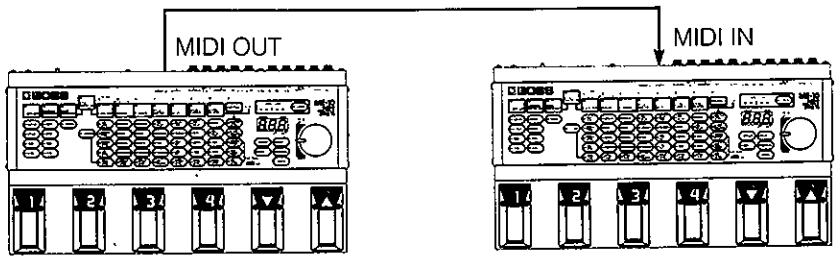
Hook things up as shown below and put the sequencer or BL-1 into bulk load standby mode.



* For specifics of BL-1 or sequencer operation, refer to the respective owner's manuals.

● Copying Data to Another ME-10

Hook things up as shown below, and match the MIDI send and receive channels. Next, get the receiving ME-10 ready to accept SysEx data. See "Receiving Data" on page 53 for more on that.



* When the transmitting MIDI channel is set to Omni ON, data is transmitted over MIDI channel 1.

<How to Transmit Data>

In sending SysEx messages, there is one method for transmitting data for all 128 patches, and another for transmitting one specific patch.

① Check to see that you're in Play mode. (The Play button light will be on.)

* If it's not, press the [PLAY] button to turn it on.

② Press the [MIDI] button twice.

The letters "*Ld*" will appear in the display to indicate the bulk load mode.

③ Use the shuttle dial to select the kind of data to be transmitted.

To send patch data for all 128 patches:

select *ALL*

To send patch data for a specific patch:

select the desired patch (just as you have all along).

④ Press [WRITE].

The LED display will begin to flash, and data transmission is started. When that is finished, you'll be returned to the situation in Step 3. To cancel, press [PLAY]; the Play button will light and you will be returned to normal Play mode.

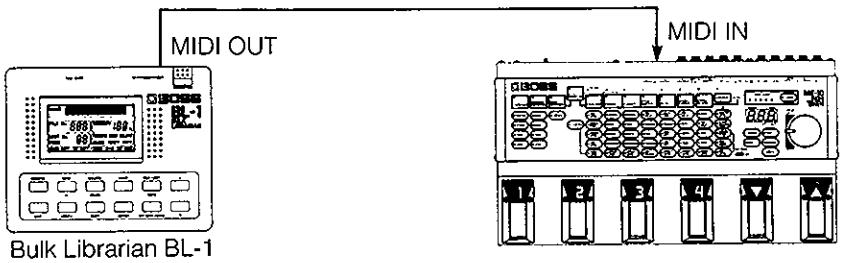
* To transmit more patches, repeat Steps ③ and ④.

2. Receiving Data (Bulk Load)

〈Making the Connections〉

● Transmitting Data From a BL-1 Bulk Librarian or Sequencer to the ME-10

Make the connections below. Make sure the ME-10 MIDI channel matches the unit number of the BL-1 or sequencer.



Bulk Librarian BL-1

* Refer to your BL-1 or sequencer manual for more information about their operations.

〈How to Receive〉

① Check to see that you're in Play mode. (The Play button light will be on.)

* If it's not, press the [PLAY] button to turn it on.

② Press the [MIDI] button twice. The letters "*Ld*" will appear in the display to indicate that you are in bulk load mode.

③ Transmit the data from the BL-1 or sequencer.

During transmission the LED display will flash. When downloading is complete, you will be returned to bulk load mode.

④ Press [PLAY]. The Play button will light, and you'll be returned to Play mode.

MEMO

Section V

Appendices

■ Troubleshooting

If you run into a problem, or the unit is not responding properly, refer to this section. If you can't resolve the problem, discontinue use immediately and contact your Roland retailer or nearest Roland Service Center.

"No Sound/Low Volume"

* Is the volume turned down all the way?
  Check the volume also on any connected amps or mixers.
* Can you hear anything through headphones?
  If you're getting sound through the headphones, then maybe one of the cables is disconnected or broken, or one of the external devices is set incorrectly. Check all cables and external devices one more time.
* Are the patch settings correct?
  For example, check to see that the Level is not set too low. See page 24.
* Is the Tuner in operation?
  Press the Play button to return to Play mode.
* Is the Expression Pedal Level set all the way to zero?
  Adjust the Expression Pedal.
* Is the external device connected to the Send/Return jack operating properly?
  Check it.

"Can't Select a Patch"

* Are you in Manual mode?
  Press the [PLAY] button to go to Play mode.
* Are you in Tuner mode?
  Press the [PLAY] button to go to Play mode.
* Are you in MIDI mode?
  Press the [PLAY] button to go to Play mode.
* Are you using Method 1 to call up patches?
  In the "Wait for a Number" method, the patch is not actually switched until you specify the patch number with a Number pedal. Press a Number pedal and see if that helps.

"Can't Send or Receive MIDI Messages"

* Do the MIDI channels on the connected MIDI devices match?
  Check the MIDI channel (page 51).
* Is the external MIDI device connected properly?
  Check the connections.
* Is the MIDI cable broken or disconnected?
  Try a different MIDI cable.

■ Patch/Program Change Number Table

This gives you the Program Change Number that corresponds to each of the patch numbers on the ME-10.

<GROUP 1>

NUMBER \ BANK	1	2	3	4	5	6	7	8
1	1	5	9	13	17	21	25	29
2	2	6	10	14	18	22	26	30
3	3	7	11	15	19	23	27	31
4	4	8	12	16	20	24	28	32

<GROUP 2>

NUMBER \ BANK	1	2	3	4	5	6	7	8
1	33	37	41	45	49	53	57	61
2	34	38	42	46	50	54	58	62
3	35	39	43	47	51	55	59	63
4	36	40	44	48	52	56	60	64

<GROUP 3>

NUMBER \ BANK	1	2	3	4	5	6	7	8
1	65	69	73	77	81	85	89	93
2	66	70	74	78	82	86	90	94
3	67	71	75	79	83	87	91	95
4	68	72	76	80	84	88	92	96

<GROUP 4>

NUMBER \ BANK	1	2	3	4	5	6	7	8
1	97	101	105	109	113	117	121	125
2	98	102	106	110	114	118	122	126
3	99	103	107	111	115	119	123	127
4	100	104	108	112	116	120	124	128

■ Factory Preset Settings

The following are some of the factory default settings for features of the ME-10.

Patch Call-up Method (page 13): "Wait for a Number", Method 1
Tuner Standard Pitch (page 18): 440 Hz
Tuner Mode (page 18): String Name Display On/Regular Tuning
Tuner Output Level (page 19): 0 (muted)
MIDI Channel (page 51): OMNI ON (Transmit over channel 1)
Effect Off Handling of Delay/Reverb Sounds: Continue output of repeating/lingering reverb sounds

〈〈How the ME-10 Handles the Cutoff of Delay/Reverb Sounds〉〉

There is a built-in feature on the ME-10 that will let repeating sounds from a Delay or lingering reverberations from the Reverb continue to be output and die out naturally after you turn the effect off. Otherwise, you would get an unnatural cutoff of the sound every time you switch from a patch that uses Delay or Reverb to one that doesn't.

〈Setting the Handling Method:〉

This setting determines whether lingering sounds from Reverb/Delay will or will not be cut off when you switch the effect off (or switch to a patch with no Delay/Reverb).

① Turn the power off.

② While holding down Number Pedal [4], turn the power back on again.

③ The display will show the current setting, and you can change it with the shuttle dial:
d-1 : Continue output of repeating/lingering reverb sounds
d-2 : Cut off repeating/lingering reverb sounds

④ Press [PLAY] to start normal operation.

■ Initialization

The initialization process allows you to retrieve all or some of the unit's original factory presets.

⟨⟨Initializing One Patch⟩⟩

Here's how to initialize a specific patch:

① Turn the power off.

② While holding down the "1" Number pedal, turn the power back on. The display and Number pedal lights will show the patch that will be initialized if you press [WRITE] at this point.
A "*F*" will be displayed as the factory presets are loaded.

③ Select the patch you wish to initialize.

④ Press [WRITE].
The factory preset data is retrieved. When complete, you can return to Step C and initialize additional patches if you wish.
⑤ Press [PLAY] to return to Play mode.

⟨⟨Initializing All Patches⟩⟩

This procedure will return all patches and all other settings to their factory preset values.
① Turn off the power.

② While holding down the "▼" Bank pedal, turn the power back on. "F.P." will be displayed to show that all patches have been initialized.

✻ To cancel initialization, press [PLAY]. You'll be returned to Play mode.

③ Press [WRITE].
The factory presets will be retrieved. The unit will automatically be returned to the Play mode when the process is complete.

Roland Exclusive Messages

1. Data Format for Exclusive Messages

Roland's MIDI implementation uses the following data format for all exclusive messages (type IV):

Byte	Description
F0H	Exclusive status
41H	Manufacturer ID (Roland)
DEV	Device ID
MDL	Model ID
CMD	Command ID
[BODY]	Main data
F7H	End of exclusive

MIDI status : F0H, F7H

An exclusive message must be flanked by a pair of status codes, starting with a Manufacturer-ID immediately after F0H (MIDI version1.0).

Manufacturer-ID : 41H

The Manufacturer-ID identifies the manufacturer of a MIDI instrument that triggers an exclusive message. Value 41H represents Roland's Manufacturer-ID.

Device-ID : DEV

The Device-ID contains a unique value that identifies the individual device in the multiple implementation of MIDI instruments. It is usually set to 00H - 0FH, a value smaller by one than that of a basic channel, but value 00H - 1FH may be used for a device with multiple basic channels.

Model ID : MDL

The Model-ID contains a value that uniquely identifies one model from another. Different models, however, may share an identical Model-ID if they handle similar data.

The Model-ID format may contain 00H in one or more places to provide an extended data field. The following are examples of valid Model IDs, each representing a unique model:

01H
02H
03H
00H, 01H
00H, 02H
00H, 00H, 01H

Command ID : CMD

The Command-ID indicates the function of an exclusive message. The Command-ID format may contain 00H in one or more places to provide an extended data field. The following are examples of valid Command IDs, each representing a unique function:

01H
02H
03H
00H, 01H
00H, 02H
00H, 00H, 01H

Main data : BODY

This field contains a message to be exchanged across an interface. The exact data size and contents will vary with the Model-ID and Command-ID.

2. Address-mapped Data Transfer

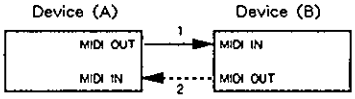
Address mapping is a technique for transferring messages conforming to the data format given in Section 1. It assigns a series of memory-resident records-waveform and tone data, switch status, and parameters, for example-to specific locations in a machine-dependent address space, thereby allowing access to data residing at the address a message specifies.

Address-mapped data transfer is therefore independent of models and data categories. This technique allows use of two different transfer procedures: one-way transfer and handshake transfer.

One way transfer procedure (See Section 3 for details.)

This procedure is suited for the transfer of a small amount of data. It sends out an exclusive message completely independent of a receiving device status.

Connection Diagram

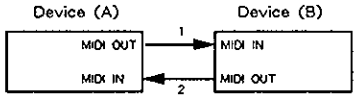


Connection at point 2 is essential for "Request data" procedures. (See Section 3.)

Handshake transfer procedure (This device does not cover this procedure)

This procedure initiates a predetermined transfer sequence (handshaking) across the interface before data transfer takes place. Handshaking ensures that reliability and transfer speed are high enough to handle a large amount of data.

Connection Diagram



Connection at points 1 and 2 is essential.

Notes on the above two procedures

* There are separate Command IDs for different transfer procedures.
* Devices A and B cannot exchange data unless they use the same transfer procedure, share identical Device-ID and Model ID, and are ready for communication.

3. One way Transfer Procedure

This procedure sends out data all the way until it stops and is used when the messages are so short that answerbacks need not be checked. For long messages, however, the receiving device must acquire each message in time with the transfer sequence, which inserts intervals of at least 20 milliseconds in between.

Types of Messages

Message	Command ID
Request data 1	RQ1 (11H)
Data set 1	DT1 (12H)

Request data = 1 : RQ1 (11H)

This message is sent out when there is a need to acquire data from a device at the other end of the interface. It contains data for the address and size that specify designation and length, respectively, of data required.

On receiving an RQ1 message, the remote device checks its memory for the data address and size that satisfy the request.
If it finds them and is ready for communication, the device will transmit a "Data set 1 (DT1)" message, which contains the requested data. Otherwise, the device will send out nothing.

Byte	Description
F0H	Exclusive status
41H	Manufacturer ID (Roland)
DEV	Device ID
MDL	Model ID
11H	Command ID
aaH	Address MSB
⋮	⋮
	LSB
ssH	Size MSB
⋮	⋮
	LSB
sum	Check sum
F7H	End of exclusive

* The size of the requested data does not indicate the number of bytes that will make up a DT1 message, but represents the address fields where the requested data resides.
* Some models are subject to limitations in data format used for a single transaction. Requested data, for example, may have a limit in length or must be divided into predetermined address fields before it is exchanged across the interface.
* The same number of bytes comprises address and size data, which, however, vary with the Model-ID.
* The error checking process uses a checksum that provides a bit pattern where the least significant 7 bits are zero when values for an address, size, and that checksum are summed.

#Data set 1 : DT1 (12H)

This message corresponds to the actual data transfer process. Because every byte in the data is assigned a unique address, a DT1 message can convey the starting address of one or more data as well as a series of data formatted in an address-dependent order.

The MIDI standards inhibit non-real time messages from interrupting an exclusive one. This fact is inconvenient for the devices that support a "soft-through" mechanism. To maintain compatibility with such devices, Roland has limited the DT1 to 256 bytes so that an excessively long message is sent out in separate segments.

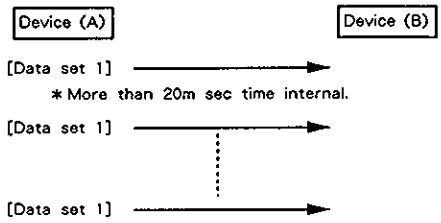
Byte	Description
F0H	Exclusive
41H	Manufacturer ID (Roland)
DEV	Device ID
MDL	Model ID
12H	Command ID
aaH	Address MSB
⋮	⋮
	LSB
ddH	Data
⋮	⋮
sum	Check sum
F7H	End of exclusive

* A DT1 message is capable of providing only the valid data among those specified by an RQ1 message.
* Some models are subject to limitations in data format used for a single transaction. Requested data, for example, may have a limit in length or must be divided into predetermined address fields before it is exchanged across the interface.
* The number of bytes comprising address data varies from one Model-ID to another.
* The error checking process uses a checksum that provides a bit pattern where the least significant 7 bits are zero when values for an address, size, and that checksum are summed.

#Example of Message Transactions

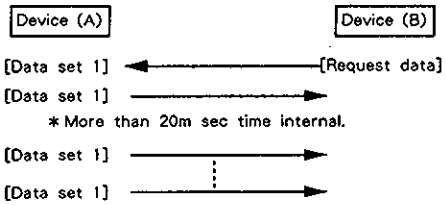
● Device A sending data to Device B

Transfer of a DT1 message is all that takes place.



● Device B requesting data from Device A

Device B sends an RQ1 message to Device A. Checking the message, Device A sends a DT1 message back to Device B.



GUITAR MULTIPLE EFFECTS
Model ME-10

MIDI Implementation

Date : Feb. 14 1992
Version : 1.00

1. TRANSMITTED DATA

■ Program Change

Status	Second
CnH	ppH

n = MIDI channel : 0H – FH (ch. 1 – ch. 16)
pp = Program number : 00H – 7FH (0 – 127)

Sends this on changing the patch of the ME-10.

■ System Exclusive Message

Status	
F0H	System Exclusive
F7H	EOX (End of System Exclusive)

Sends patch setting parameters on an external request or a bulk dump instruction.

2. RECOGNIZED RECEIVE DATA

■ Program Change

Status	Second
CnH	ppH

n = MIDI channel : 0H – FH (ch. 1 – ch. 16)
pp = Program number : 00H – 7FH (0 – 127)

Calls a patch corresponding to the received program number.

■ System Exclusive Message

Status	
F0H	System Exclusive
F7H	EOX (End of System Exclusive)

Allows generation of a request for or writing of setting parameters of a patch or temporary area.

3. EXECLUSIVE COMMUNICATION

The ME-10 can send and receive setting parameters to/from external MIDI instruments useing exclusive message.
Bulk dumps system data or, on a patch bassis, data in the internal memory.
When set to data load mode and ready for receive status, receive exclusive messages and stores the received data into the internal memory or temporary.
Carries out exclusive communications in accordance with protocol of Roland Exclusive Format, type IV, one way communications.

■ Request Data (One Way)

● Request Data 1 RQ1 (11H)

If the received exclusive message contains the addresses that match parameter addresses and the size of addresses is one or more, sends the data in these address locations patch by patch, useing data set (DT1).
The device ID is the value of MIDI channel subtracted by 1.
The ME-10 does not send this message.

Byte	Description
F0H	Exclusive status
41H	Manufacture ID (Roland)
0cH	Device ID : c = 0H – FH (1ch – 16ch)
49H	Model ID (ME-10)
11H	Command ID (RQ1)
aaH	Address MSB
aaH	Address
aaH	Address LSB
ssH	Size MSB
ssH	Size
ssH	Size LSB
sum	Checksum
F7H	EOX (End of Exclusive)

● Data Set (One Way) DT1 (12H)

When set to data load mode and ready for receive data, stores the received data into the internal memory or temporary.
Send this message in the following case.
Sends the data specified by the received "Request Data".
When bulk dump is activated, sends setting parameters patch by patch.

Byte	Description
F0H	Exclusive status
41H	Manufacture ID (Roland)
0cH	Device ID : c = 0H – FH (1ch – 16ch)
49H	Model ID (ME-10)
12H	Command ID (DT1)
aaH	Address MSB
aaH	Address
aaH	Address LSB
ddH	Data
:	:
sum	Checksum
F7H	EOX (End of Exclusive)

4. ADDRESS MAPPING OF PARAMETERS

The address is displayed under 7-bit hexadecimal notation.

	MSB	LSB
Address	0000 00mm 0ggb bbnn	00pp pppp

Descriptionmm : 0 = Temporary
1 = Internal Memory 1-1-1 – 4-8-4
2 = Internal Memory Manual
gg : Memory Group
bbb : Memory Bank
nn : Memory Number
pppppp : Parameter Address
(00H – 37H : Internal Memory)
(00H – 38H : Temporary)

Effective address of each parameter is the start address of the correcspoinding block plus an offset address.

Temporary area

This is the data area for parameter setting to be monitored and edited. The parameters are loaded from the internal memory when changing the patch or changing to the Manual mode.

Start address	Description	
00 00 00H	Temporary	* Table 1 & 2

Internal Memory area

This is the data area for patch parameter in memory area.

Start address	Description	
01 00 00H	Internal Memory 1 – 1 – 1	* Table 1
01 01 00H	Internal Memory 1 – 1 – 2	
:	:	
:	:	
01 7E 00H	Internal Memory 4 – 8 – 3	
01 7F 00H	Internal Memory 4 – 8 – 4	
02 00 00H	Internal Memory Manual	

* Table 1 Parameter offset address

Offset address		Description	
00 00 00H	0abc defgB	Effect On/Off (MSB)	
00 00 01H	0hij 0000B	Effect On/Off (LSB) a : Compressor b : Overdrive/Distortion c : Noise suppressor d : Effect send/return e : Equalizer f : Phaser/Flanger/Pitch shifter g : Delay h : Chorus i : Reverb j : G.Amp Simulator 0 : Off 1 : On	
00 00 02H	0000 00aaB	Mode (MSB)	
00 00 03H	00bc ccddB	Mode (LSB) aa : Overdrive/Distortion Mode 0 : Overdrive 1 1 : Overdrive 2 2 : Distortion 1 3 : Distortion 2 b : Equalizer Mode 0 : Equalizer 1 : Wah cc : Phaser/Flanger/Pitch Shifter Mode 0 : Phaser 1 : Flanger 2 : Pitch Shifter ddd : Reverb Mode 0 : Hall 1 1 : Hall 2 2 : Room 1 3 : Room 2 4 : Plate 1 5 : Plate 2	
		Compressor	
00 00 04H	0aaa aaaaB	Sustain	0 – 100
00 00 05H	0aaa aaaaB	Attack	0 – 100
00 00 06H	0aaa aaaaB	Tone	0 – 100 (– 50 – + 50)
00 00 07H	0aaa aaaaB	Level	0 – 100
		Overdrive/Distortion	
00 00 08H	0aaa aaaaB	Drive	0 – 100
00 00 09H	0aaa aaaaB	Tone	0 – 100 (– 50 – + 50)
00 00 0AH	0aaa aaaaB	Level	0 – 100
		Noise Suppressor	
00 00 0BH	0aaa aaaaB	Threshold	0 – 100
		Equalizer	
00 00 0CH	000a aaaaB	Hi-Level	0 – 24 (– 12 – + 12)
00 00 0DH	0000 aaaaB	Mid-Freq	0 – 10 0 : 200Hz 1 : 250Hz 2 : 315Hz 3 : 400Hz 4 : 500Hz 5 : 630Hz 6 : 800Hz 7 : 1.00kHz 8 : 1.25kHz 9 : 1.60kHz 10 : 2.00kHz
00 00 0EH	000a aaaaB	Mid-Level	0 – 24 (– 12 – + 12)
00 00 0FH	000a aaaaB	Lo-Level	0 – 24 (– 12 – + 12)
00 00 10H	000a aaaaB	Total-Level	0 – 24 (– 12 – + 12)
00 00 11H	0000 0000B	dummy	
00 00 12H	0aaa aaaaB	Wah Pedal	0 – 100
		Phaser	
00 00 13H	0aaa aaaaB	Manual	0 – 100
00 00 14H	0aaa aaaaB	Rate	0 – 100
00 00 15H	0aaa aaaaB	Depth	0 – 100
00 00 16H	0aaa aaaaB	Resonance	0 – 100
00 00 17H	0aaa aaaaB	Effect Level	0 – 100
		Flanger	
00 00 18H	0aaa aaaaB	Manual	0 – 100
00 00 19H	0aaa aaaaB	Rate	0 – 100
00 00 1AH	0aaa aaaaB	Depth	0 – 100
00 00 1BH	0aaa aaaaB	Resonance	0 – 100
00 00 1CH	0aaa aaaaB	Effect Level	0 – 100
		Pitch Shifter	
00 00 1DH	0aaa aaaaB	Pre delay	0 – 100
00 00 1EH	000a aaaaB	Chromatic	0 – 24 (– 12 – + 12)
00 00 1FH	0aaa aaaaB	Fine	0 – 100 (– 50 – + 50)
00 00 20H	0aaa aaaaB	Feedback	0 – 100
00 00 21H	0aaa aaaaB	Mix Balance	0 – 100 (– 50 – + 50)
		Delay	
00 00 22H	0000 00aaB	Delay Time (MSB)	
00 00 23H	0aaa aaaaB	Delay Time (LSB)	0 – 998 (1 – 999ms) 999 – 1019 (1.00 – 1.20s)
00 00 24H	0aaa aaaaB	Feedback	0 – 100
00 00 25H	0000 aaaaB	High Cut	0 – 12 (– 12 – 0)
00 00 26H	0000 aaaaB	Low Cut	0 – 12 (– 12 – 0)
00 00 27H	0aaa aaaaB	Effect Level	0 – 100
		Chorus	
00 00 28H	0aaa aaaaB	Pre delay	0 – 60
00 00 29H	0aaa aaaaB	Rate	0 – 100
00 00 2AH	0aaa aaaaB	Depth	0 – 100
00 00 2BH	000a aaaaB	Tone	0 – 24 (– 12 – + 12)
00 00 2CH	0aaa aaaaB	Effect Level	0 – 100
		Reverb	
00 00 2DH	0000 000aB	Pre Delay (MSB)	
00 00 2EH	0aaa aaaaB	Pre Delay (LSB)	0 – 150
00 00 2FH	0aaa aaaaB	Time	0 – 100
00 00 30H	000a aaaaB	Tone	0 – 24 (– 12 – + 12)
00 00 31H	0aaa aaaaB	Effect Level	0 – 100
00 00 32H	0aaa aaaaB	Master Level	0 – 100
		Exp1 Pedal Assign	
00 00 33H	000a aaaaB	Assign Target	* Table 3
00 00 34H	0000 0000B	dummy	
00 00 35H	0aaa aaaaB	Maximum Value	0 – 120
00 00 36H	0000 0000B	dummy	
00 00 37H	0aaa aaaaB	Minimum Value	0 – 120

* Table 2 Sound chenge request

Offset address	Description
00 00 38H 0000 0000B	Sound change request

Sound change request is a parameter resides only in the temporary area. Receiving this parameter after temporary area data allters the tone color.

* Table 3 Exp1 Pedal assign

Assign Target	Max/Min
00H : Exp1 Assign off	0
(Compressor)	
01H : Sustain	0 – 100
02H : Attack	0 – 100
03H : Tone	0 – 100 (– 50 – + 50)
04H : Level	0 – 100
(Overdrive/Distortion)	
05H : Mode	0 – 3 0 : Overdrive 1 1 : Overdrive 2 2 : Distortion 1 3 : Distortion 2
06H : Drive	0 – 100
07H : Tone	0 – 100 (– 50 – + 50)
08H : Level	0 – 100
(Equalizer/Wah)	
09H : Wah Pedal	0 – 100
(Phaser)	
0AH : Manual	0 – 100
0BH : Rate	0 – 100
0CH : Depth	0 – 100
0DH : Resonance	0 – 100
0EH : Effect Level	0 – 100
(Flanger)	
0FH : Rate	0 – 100
10H : Depth	0 – 100
11H : Resonance	0 – 100
12H : Effect Level	0 – 100
(Pitch Shifter)	
13H : Chromatic	0 – 120 (– 12 – + 12)
14H : Feedback	0 – 100
15H : Mix Balance	0 – 100 (– 50 – + 50)
(Delay)	
16H : Delay Time	0 – 120 (1ms – 1.20s)
17H : Feedback	0 – 100
18H : Effect Level	0 – 100
(Chorus)	
19H : Rate	0 – 100
1AH : Depth	0 – 100
1BH : Effect Level	0 – 100
(Reverb)	
1CH : Time	0 – 100
1DH : Effect Level	0 – 100
1EH : Master Level	0 – 100

GUITAR MULTIPLE EFFECTS
Model ME-10

MIDI Implementation Chart

Date : Feb. 14. 1992
Version : 1.00

Function •••		Transmitted	Recognized	Remarks
Basic	Default	1 – 16	1 – 16	Memorized
Channel	Changed	1 – 16	1 – 16	＊1
Mode	Default	×	OMNI ON/OFF	Memorized
	Messages	×	×	＊2
	Altered	＊＊＊＊＊＊＊＊＊		
Note		×	×	
Number	True Voice	＊＊＊＊＊＊＊＊＊	×	
Velocity	Note ON	×	×	
	Note OFF	×	×	
After	Key's	×	×	
Touch	Ch's	×	×	
Pitch Bender		×	×	
Control Change		×	×	
Prog		○ (0 – 127)	○ (0 – 127)	
Change	True #	＊＊＊＊＊＊＊＊＊	○ (0 – 127)	
System Exclusive		○	○	Parameter value
System	Song Pos	×	×	
Common	Song Sel	×	×	
	Tune	×	×	
System	Clock	×	×	
Real Time	Commands	×	×	
	Local ON/OFF	×	×	
Aux	All Notes OFF	×	×	
Messages	Active Sense	×	×	
	Reset	×	×	

Notes

＊1 Basic Channel is common to transmitting/receiving but not exclusive to one of them.

＊2 When set to OMNI On, Basic Channel number is 1.

○ : Yes
× : No

■ Blank Chart

ME-10 BLANK CHART

	GROUP									
	BANK									
	NUMBER									
COMPRESSOR	SUSTAIN *									
	ATTACK *									
	TONE *									
	LEVEL *									
OVERDRIVE / DISTORTION	MODE *									
	DRIVE *									
	TONE *									
	LEVEL *									
N. SUPPRESSOR	THRESHOLD									
SEND / RETURN	ON or OFF									
EQUALIZER	1:EQ / 2:WAH									
	HIGH LEVEL									
	MIDDLE FREQ *									
	MIDDLE LEVEL									
	LOW LEVEL									
	TOTAL LEVEL									
PHASER	MANUAL *									
	RATE *									
	DEPTH *									
	RESONANCE *									
	EFFECT LEVEL *									
FLANGER	MANUAL									
	RATE *									
	DEPTH *									
	RESONANCE *									
	EFFECT LEVEL *									
PITCH SHIFTER	PRE DELAY									
	CHROMATIC *									
	FINE									
	FEEDBACK *									
	MIX BALANCE *									
DELAY	DELAY TIME *									
	FEEDBACK *									
	HIGH CUT									
	LOW CUT									
	EFFECT LEVEL *									
STEREO CHORUS	PRE DELAY *									
	RATE *									
	DEPTH *									
	TONE									
	EFFECT LEVEL *									
STEREO REVERB	MODE									
	PRE DELAY									
	TIME *									
	TONE									
	EFFECT LEVEL *									
MASTER LEVEL *										
G.AMP SIMULATOR										
ASSIGN										
ASSIGN MAX										
ASSIGN MIN										

* : Expression Pedal Assignable

ME-10 BLANK CHART

	GROUP								
	BANK								
	NUMBER								
COMPRESSOR	SUSTAIN *								
	ATTACK *								
	TONE *								
	LEVEL *								
OVERDRIVE / DISTORTION	MODE *								
	DRIVE *								
	TONE *								
	LEVEL *								
N. SUPPRESSOR	THRESHOLD								
SEND / RETURN	ON or OFF								
EQUALIZER	1:EQ / 2:WAH								
	HIGH LEVEL								
	MIDDLE FREQ *								
	MIDDLE LEVEL								
	LOW LEVEL								
	TOTAL LEVEL								
PHASER	MANUAL *								
	RATE *								
	DEPTH *								
	RESONANCE *								
	EFFECT LEVEL *								
FLANGER	MANUAL *								
	RATE *								
	DEPTH *								
	RESONANCE *								
	EFFECT LEVEL *								
PITCH SHIFTER	PRE DELAY								
	CHROMATIC *								
	FINE								
	FEEDBACK *								
	MIX BALANCE *								
DELAY	DELAY TIME *								
	FEEDBACK *								
	HIGH CUT								
	LOW CUT								
	EFFECT LEVEL *								
STEREO CHORUS	PRE DELAY *								
	RATE *								
	DEPTH *								
	TONE								
	EFFECT LEVEL *								
STEREO REVERB	MODE								
	PRE DELAY								
	TIME *								
	TONE								
	EFFECT LEVEL *								
MASTER LEVEL *									
G.AMP SIMULATOR									
ASSIGN									
ASSIGN MAX									
ASSIGN MIN									

* : Expression Pedal Assignable

ME-10 BLANK CHART

	GROUP									
	BANK									
	NUMBER									
COMPRESSOR	SUSTAIN *									
	ATTACK *									
	TONE *									
	LEVEL *									
OVERDRIVE / DISTORTION	MODE *									
	DRIVE *									
	TONE *									
	LEVEL *									
N. SUPPRESSOR	THRESHOLD									
SEND / RETURN	ON or OFF									
EQUALIZER	1:EQ / 2:WAH									
	HIGH LEVEL									
	MIDDLE FREQ *									
	MIDDLE LEVEL									
	LOW LEVEL									
	TOTAL LEVEL									
PHASER	MANUAL *									
	RATE *									
	DEPTH *									
	RESONANCE *									
	EFFECT LEVEL *									
FLANGER	MANUAL *									
	RATE *									
	DEPTH *									
	RESONANCE *									
	EFFECT LEVEL *									
PITCH SHIFTER	PRE DELAY									
	CHROMATIC *									
	FINE									
	FEEDBACK *									
	MIX BALANCE *									
DELAY	DELAY TIME *									
	FEEDBACK *									
	HIGH CUT									
	LOW CUT									
	EFFECT LEVEL *									
STEREO CHORUS	PRE DELAY *									
	RATE *									
	DEPTH *									
	TONE									
	EFFECT LEVEL *									
STEREO REVERB	MODE									
	PRE DELAY									
	TIME *									
	TONE									
	EFFECT LEVEL *									
MASTER LEVEL *										
G.AMP SIMULATOR										
ASSIGN										
ASSIGN MAX										
ASSIGN MIN										

* : Expression Pedal Assignable

■ Specifications

ME-10 : Guitar Multiple Effects

Signal Processing:
(except. Compressor,Overdrive/Distortion,
Noise Suppressor and Guitar Amp Simulator)
A/D Conversion: 16bit linear
D/A Conversion: 16bit linear

Sampling Frequency: 32kHz

Patches: 128 + Manual Setting

Built-in Effects:
Compressor, Overdrive/Distortion, Noise Suppressor,
Equalizer/Wah, Phaser/Flanger/Pitch Shifter, Delay,
Stereo Chorus, Stereo Reverb, Guitar Amp Simulator

Tuner:
Concert Pitch: 435Hz to 445Hz (1Hz steps)
Tuning Range: A0(27.50Hz) to B6(1975.53Hz)
Tuning Accuracy: ±1cent

Nominal Input Level:
Input: -20dBm
Effect Return: -20dBm

Input Impedance:
Input: 1MΩ
Effect Return: 100kΩ

Nominal Output Level:
Output L/R: -20dBm
Effect Send: -20dBm

Output Impedance
Output L/R: 1kΩ
Effect Send: 1kΩ

Recommended Load Impedance:
Output L/R: 10kΩ or greater
Effect Send: 10kΩ or greater

Display:
7 segments, 3 charactors (LED)

Connectors:
Input Jack (1/4 inch phone type)
Output Jacks L(MONO)/R (1/4 inch phone type)
Effect Send Jack (1/4 inch phone type)
Effect Return Jack (1/4 inch phone type)
Expression Pedal 1/2 Jack
Tuner Remote Jack
Manual Remote Jack
Bypass Remote Jack
Headphones Jack (Stereo mini type)
MIDI Connectors (In,Out)

Power Supply: AC117V, AC230V or AC240V

Power Consumption: 20W

Dimensions:
435(W) x 235(D) x 70(H) mm
17-1/8"(W) x 9-1/4"(D) x 2-13/16"(H) inches

Weight:
3.6 kg / 7 lbs 15 oz

Accessories:
Pedal Seal
Owner's Manual

Options:
FS-5U Footswitch
FV-300L Foot Volume/Expression with PCS-33
Roland EV-5 Expression Pedal

* 0dBm=0.775Vrms
* In the interest of product improvement, the specifications of this unit are subject to change without prior notice.

■ Index

0-0 ..... 29, 30
<ASSIGN> 36
[ASSIGN] 26, 33
bypass 14
bank 11, 12, 13
bulk dump 52
bulk load 53
canceling a setting 28
compressor 32, 36
copy 30, 52
delay 32, 42
direct guitar sound 14, 19
distortion 32, 37
double flat tuning 19
effect button 23, 32
effect on/off 23
equalizer 32, 38
exclusive message 49
expression pedal 3, 10, 26, 33, 34, 36, 38, 41
factory preset 56
factory preset setting 55
flanger 23, 32, 40
flat tuning 19
foot switch 10, 14, 15, 31
group 11, 12, 13
guitar amp simulator 45
implementation 61
implementation chart 64
initialization 56
lavel 32
manual 31
master level 27
[MAX] 26, 33
MIDI 47
MIDI channel 51
[MIN] 26, 33
mode 19
mute 19
noise suppressor 32, 37
note name 16, 17
number 11, 12, 13
oFF 26
omni 48, 51
on 26
output jack 27
output level 19, 27
overdrive 32, 37
parameter 22, 23, 24, 25, 33
parameter button 24
patch 11, 13, 54
phaser 23, 32, 39
pitch shifter 23, 32, 41
[PLAY] 14, 15, 18, 28, 31
play button 12
play mode 11
program number 49
receiving data 53
regular tuning 19
send/return 25, 32
shuttle dial 24, 33
standard pitch 18
stereo chorus 32, 43
stereo reverb 32, 44
string name 16, 17
SysEx message 52
transmitting data 52
tuner 15
tuning guide 17
wah 38
write operation 29

For Nordic Countries

Apparatus containing Lithium batteries

ADVARSEL!

Lithiumbatteri – Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandøren.

VARNING!

Explosionsfara vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens instruktion.

ADVARSEL!

Lithiumbatteri – Eksplosjonsfare.
Ved utskifting benyttes kun batteri som anbefalt av apparatfabrikanten.
Brukt batteri returneres apparatleverandøren.

VAROITUS!

Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

For Germany

Bescheinigung des Herstellers/Importeurs

Hiermit wird bescheinigt, daß der/die/das
GUITAR MULTIPLE EFFECTS ME-10
(Gerät. Typ. Bezeichnung)

in Übereinstimmung mit den Bestimmungen der
Amtsbl. Vfg 1046/1984
(Amtsblattverfügung)

funk-entstört ist.
Der Deutschen Bundespost wurde das Inverkehrbringen dieses Gerätes angezeigt und die Berechtigung zur Überprüfung der Serie auf Einhaltung der Bestimmungen eingeräumt.

Roland Corporation Osaka/Japan
Name des Herstellers/Importeurs

For the USA

FEDERAL COMMUNICATIONS COMMISSION RADIO FREQUENCY INTERFERENCE STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Unauthorized changes or modification to this system can void the users authority to operate this equipment.

For Canada

CLASS B **NOTICE**

This digital apparatus does not exceed the Class B limits for radio noise emissions set out in the Radio Interference Regulations of the Canadian Department of Communications.

CLASSE B **AVIS**

Cet appareil numérique ne dépasse pas les limites de la classe B au niveau des émissions de bruits radioélectriques fixés dans le Réglement des signaux parasites par le ministère canadien des Communications.

BOSS
Products of Roland

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